



**Environment
Agency**

Conditions of Contract Services

East Cheshire Aquifer Groundwater Model update

Document Version: October 2019

Contract Number: [REDACTED]

1. DEFINITIONS

1.1. In the Contract, unless the context otherwise requires the following words and expressions shall have the following meanings assigned to them.

1.1.1. Agency

The Environment Agency, its successors and assigns.

1.1.2. Agency Property

All property issued or made available for use by the Agency to the Contractor in connection with the Contract.

1.1.3. The Appendix

The Appendix to these Conditions.

1.1.4. The Contract

These Conditions including the Appendix, any Special Conditions, Specification, Pricing Schedule, Contractor's tender, acceptance letter and any relevant documents agreeing modifications exchanged before the Contract is awarded, and any subsequent amendments or variations agreed in writing.

1.1.5. The Contractor

The person, firm company or body who undertakes to supply the Services to the Agency as defined in the Contract.

1.1.6. Contract Period

The time period stated in the Appendix or otherwise provided in the Contract, for the performance of the Services.

1.1.7. Contractor Personnel

means all directors, officers, employees, agents, consultants and contractors of the Contractor and/or of any sub-contractor engaged in the performance of its obligations under this Contract

1.1.8. Contract Price

The price exclusive of VAT set out in the Contract for which the Contractor has agreed to supply the services.

1.1.9. Contract Supervisor

Any duly authorised representative of the Agency notified in writing to the Contractor for all purposes connected with the Contract. Any Notice or other written instruction given by or made to the Contract Supervisor, shall be taken as given by or made to the Agency.

1.1.10. Contracting Authority

means any contracting authorities (other than the Environment Agency) as defined in regulation 2 of the Public Contract Regulations 2015 (SI 2015/102) (as amended).

1.1.11. Data Protection Legislation

means: (i) the General Data Protection Regulation (Regulation (EU) 2016/679) or GDPR, the Law Enforcement Directive (Directive (EU) 2016/680) ("LED") and any applicable national implementing Laws as amended from time to time (ii) the Data Protection Act 1998 ("DPA 1998") and/or the Data Protection Act 2018 ("DPA 2018") to the extent that it relates

to processing of personal data and privacy; (iii) all applicable Law about the processing of personal data and privacy

1.1.12. Data Protection Schedule

The Schedule attached to this Contract describing how the Parties will comply with the Data Protection Legislation.

1.1.13. Intellectual Property Rights

All Intellectual Property Rights including without limitation, patents, patent applications, design rights, registered designs, utility models, trade and service marks and applications for same, copyright know-how, rights in semi-conductor chip topography, and in each case whether protectable at law or not, and if protectable, whether an application has been made for such protection or not, and all similar industrial, commercial, monopoly or other intellectual property rights whether present or future, vested or contingent wherever protected.

1.1.14. Law

means any law, subordinate legislation within the meaning of Section 21(1) of the Interpretation Act 1978, bye-law, enforceable right within the meaning of Section 2 of the European Communities Act 1972, regulation, order, regulatory policy, mandatory guidance or code of practice, judgment of a relevant court of law, or directives or requirements with which the Contractor is bound to comply

1.1.15. Notice

Any written instruction or notice given to the Contractor by the Contract Supervisor, delivered by:

i. fax, or hand delivery to the Contractor's registered office or other address notified for the purposes of the Contract and deemed to have been served at the date and time of delivery;

First class post to the Contractor's registered office. Such Notices are deemed to have been served 48 hours after posting.

1.1.16. Results

All things produced in performing the Services including maps, plans, photographs, drawings, tapes, statistical data, experimental results, field data, analysis of results, published and unpublished results and reports, inventions, computer programmes and user documentation.

1.1.17. The Resulting Rights

All Intellectual Property Rights in the Results that are originated, conceived, written or made by the Contractor, whether alone or with others in the performance of the Services or otherwise resulting from the Contract.

1.1.18. Permission

Express permission given in writing before the act being permitted.

1.1.19. Services

All Services detailed in the Specification including any additions or substitutions as may be requested by the Contract Supervisor.

1.1.20. Regulations

Means the Public Contract Regulations 2015 (SI 2015/102) as amended.

1.2. Except as set out above and in the Data Protection Schedule, the Contract shall be interpreted in accordance with the Interpretation Act 1988.

1.3. All headings in these Conditions are for ease of reference only, and shall not affect the construction of the Contract.

1.4. Any reference in these Conditions to a statutory provision will include all subsequent modifications.

1.5. All undefined words and expressions are to be given their normal English meaning within the context of this Contract. Any dispute as to the interpretation of such undefined words and expressions shall be settled by reference to the definition in the Shorter Oxford English Dictionary.

2. PRECEDENCE

To the extent that the following documents form the Contract, in the case of conflict of content, they shall have the following order of precedence:

- Conditions of Contract including Appendix, Data Protection Schedule and any Special Conditions;
- Specification;
- Pricing Schedule;
- Drawings, maps or other diagrams.

3. CONTRACT SUPERVISOR

The Contractor shall strictly comply with any instruction given by the Contract Supervisor concerning or about the Contract provided such instructions are reasonable and consistent with the nature, scope and value of the Contract. All such instructions shall be in writing. The Contractor is not obliged to comply with any verbal instruction from the Contract Supervisor that is not confirmed in writing within 7 working days.

4. THE SERVICES

4.1. The Contractor shall provide all staff, equipment, materials and any other requirements necessary for the performance of the Contract using reasonable skill, care and diligence, and to the reasonable satisfaction of the Contract Supervisor.

4.2. The Contractor shall only employ in the execution and superintendence of the Contract persons who are suitable and appropriately skilled and experienced. The Contract Supervisor shall be at liberty to object to and require the Contractor to remove any person employed in or about the Contract who is unsuitable, misconducts himself, is incompetent or negligent in the performance of his duties or persists in conduct which could endanger the health or safety of others. Such persons shall not be employed again on the Contract without the Permission of the Contract Supervisor.

5. ASSIGNMENT

- 5.1. The Contractor shall not assign, transfer or sub-contract the Contract, or any part of it, without the Permission of the Contract Supervisor.
- 5.2. Any assignment, transfer or sub-contract entered into, shall not relieve the Contractor of any of his obligations or duties under the Contract.
- 5.3. Nothing in this Contract confers or purports to confer on any third party any benefit or any right to enforce any term of the Contract.

6. CONTRACT PERIOD

The Contractor shall perform the Services within the time stated in the Appendix, subject to any changes arising from Condition 10 (Variations,) and/or Condition 11 (Extensions of time.).

7. PROPERTY

- 7.1. All property issued by the Agency to the Contractor in connection with the Contract shall remain the property of the Agency, and shall be used in the execution of the Contract, and for no other purpose whatsoever without the prior approval of the Contract Supervisor.
- 7.2. The Contractor shall keep all Agency Property in safe custody and good condition, set aside and clearly marked as the property of the Agency.
- 7.3. On expiry or earlier termination of the Contract the Contractor shall, if so required, either surrender such property to the Agency or otherwise dispose of it as instructed by the Contract Supervisor.

8. MATERIALS

- 8.1. The Contractor shall be responsible for establishing his own sources of supply for goods and materials and will be responsible for ensuring the reasonable and proper conduct by his suppliers and staff whilst on the Agency's premises.
- 8.2. The Contractor shall not place, or cause to be placed, any orders with suppliers or otherwise incur liabilities in the name of the Agency or any representative of the Agency.

9. SECURITY

- 9.1. The Contractor shall be responsible for the security of all goods and equipment belonging to the Agency and used by the Contractor in the provision of the Services,

belonging to the Contractor, or Contractors staff, or sub-contractors whilst on Agency premises.

9.2. This Condition shall not prejudice the Agency's rights under Condition 15.

10. VARIATIONS

10.1. The Contract Supervisor may vary the Contract by adding to, deleting or otherwise modifying the Services to be supplied, by written order to the Contractor provided such variations are reasonable and consistent with the nature, scope and value of the Contract.

10.2. The value of any such variation, other than any variation arising out of Condition 10.3, shall be determined by reference to the rates contained in the Pricing Schedule. Where the Services so ordered are not covered in the Pricing Schedule, they shall be valued at a fair and reasonable rate agreed between the Contract Supervisor and the Contractor.

10.3. Where a variation is the result of some default or breach of the Contract by the Contractor or some other cause for which he is solely responsible, any additional cost attributable to the variation shall be borne by the Contractor.

10.4. The Contractor may also propose a variation to the Services but no such variation shall take effect unless agreed and confirmed in writing by the Contract Supervisor.

10.5. No variation shall have the effect of invalidating the Contract, or placing the Contract at large, if that variation is reasonably consistent with the nature, scope and value of the Contract. The Agency may vary the Contract to comply with a change in English Law. Such a change will be effected by the Contract Supervisor notifying the Contractor in writing.

10.6. The Agency may assign, novate or otherwise dispose of its rights and obligations under the Contract or any part thereof to:

10.6.1. any Contracting Authority; or

10.6.2. any other body established by the Crown or under statute in order substantially to perform any of the functions that had previously been performed by the Agency; or

10.6.3. any private sector body which substantially performs the functions of the Agency, provided that any such assignment, novation or other disposal shall not increase the burden of the Contractor's obligations under the Contract.

10.7. Any change in the legal status of the Agency such that it ceases to be a Contracting Authority shall not affect the validity of the Contract. In such circumstances the Contract shall bind and inure to the benefit of any successor body to the Agency.

11. EXTENSIONS OF TIME

11.1. Should the performance of the Contract be directly delayed by any cause beyond the reasonable control of the Contractor, and provided that the Contractor shall first have given the Contract Supervisor written notice within five working days after becoming aware that such delay was likely to occur, then the Contract Supervisor, if satisfied that this Condition applies:

11.1.1. in the case of any delay of which the Agency is not the cause, may grant the Contractor such extension of time, as in his opinion is reasonable, having regard without limitation, to any other delays or extensions of time that may have occurred or been granted under the Contract. The Contract Price shall not increase as a result of such an extension of time.

11.1.2. in the case of any delay of which the Agency is the cause, shall grant the Contractor a reasonable extension of time to take account of the delay.

11.2. No extension of time shall be granted where in the opinion of the Agency the Contractor has failed to use reasonable endeavours to avoid or reduce the cause and/or effects of the delay.

11.3. Any extension of time granted under this Condition shall not affect the Agency's rights to terminate or determine the Contract under Conditions 13 and 14.

12. DEFAULT

12.1. The Contractor shall be in default if he:

12.1.1. fails to perform the Contract with due skill, care, diligence and timeliness;

12.1.2. refuses or neglects to comply with any reasonable written instruction given by the Contract Supervisor;

12.1.3. is in breach of the Contract.

12.2. Where in the opinion of the Contract Supervisor, the Contractor is in default, the Contract Supervisor may serve a Notice giving at least five working days in which to remedy the default.

12.3. If the Contractor fails to comply with such a Notice the Contract Supervisor may, without prejudice to any other rights or remedies under the Contract, take over for as such a period as is necessary the performance of the relevant part of the Contract and make other arrangements for its completion. Any extra costs arising from this action, will be paid by the Contractor or deducted from any monies owing to him.

13. TERMINATION

13.1. The Agency may immediately, without prejudice to any other rights and remedies under the Contract, terminate all or any part of the Contract by Notice in writing to the Contractor, Receiver, Liquidator or to any other person in whom the Contract may become vested, if the Contractor:

13.1.1. fails in the opinion of the Contract Supervisor to comply with (or take reasonable steps to comply with) a Notice under Condition 12.2.

13.1.2. becomes bankrupt or insolvent, or has a receiving order made against him, or makes an arrangement with his creditors or (being a corporation) commences to be wound up, not being a voluntary winding up for the purpose of reconstruction or amalgamation, or has a receiver, administrator, or administrative receiver appointed by a Court.

'Termination under the Regulations'

13.2. The Agency may terminate the Contract on written Notice to the Contractor if:

13.2.1. the contract has been subject to a substantial modification which requires a new procurement procedure pursuant to regulation 72(9) of the Regulations;

13.2.2. the Contractor was, at the time the Contract was awarded, in one of the situations specified in regulation 57(1) of the Regulations, including as a result of the application of regulation 57(2), and should therefore have been excluded from the procurement procedure which resulted in its award of the Contract; or

13.2.3. The Contract should not have been awarded to the Contractor in view of a serious infringement of the obligations under the Treaties and the Regulations that has been declared by the Court of Justice of the European Union in a procedure under Article 258 of the TFEU.

14. DETERMINATION

14.1. Without prejudice to any other rights or remedies under the Contract, the Agency reserves the right to determine the Contract at any time by giving not less than one month's Notice, (or such other time period as may be appropriate).

14.2. The Agency shall pay the Contractor such amounts as may be necessary to cover his reasonable costs and outstanding and unavoidable commitments necessarily and solely incurred in properly performing the Contract prior to determination.

14.3. The Agency will not pay for any costs or commitments that the Contractor is able to mitigate and shall only pay those costs that the Agency has validated to its satisfaction. The Agency's total liability under this Condition shall not in any circumstances exceed the Contract Price that would have been payable for the Services if the Contract had not been determined.

15. INDEMNITY

15.1. Without prejudice to the Agency's remedies for breach of Contract, the Contractor shall fully indemnify the Agency and its staff against any legally enforceable and reasonably mitigated liability, loss, costs, expenses, claims or proceedings in respect of:

15.1.1. death or injury to any person;

15.1.2. loss or damage to any property excluding indirect and consequential loss;

15.1.3. infringement of third party Intellectual Property Rights which might arise as a direct consequence of the actions or negligence of the Contractor, his staff or agents in the execution of the Contract.

15.2. This Condition shall not apply where the damage, injury or death is a direct result of the actions, or negligence of the Agency or its staff.

16. LIMIT OF CONTRACTOR'S LIABILITY

16.1. The limit of the Contractor's liability for each and every claim by the Agency, other than for death or personal injury, whether by way of indemnity or by reason of breach of contract, or statutory duty, or by reason of any tort shall be:

16.1.1. the sum stated in the Appendix;

16.1.2. if no sum is stated, the Contract Price or five million pounds whichever is the greater.

17. INSURANCE

17.1. The Contractor shall insure and maintain insurance against liabilities under Condition 15 (Indemnity) in the manner and to the values listed in the Appendix to these Conditions. If no sum is stated, the value insured shall be £5M (five million pounds.)

17.2. If specifically required by the Agency, nominated insurances shall be in the joint names of the Contractor and the Agency.

17.3. The Contractor shall, upon request, produce to the Contract Supervisor documentary evidence that the insurances required are fully paid up and valid for the duration of the Contract.

18. PREVENTION OF FRAUD AND CORRUPTION

18.1. The Contractor shall not offer, give, or agree to give anything, to any person an inducement or reward for doing, refraining from doing, or for having done or refrained from doing, any act in relation to the obtaining or execution of the Contract or for showing or refraining from showing favour or disfavour to any person in relation to the Contract.

18.2. The Contractor shall take all reasonable steps, in accordance with good industry practice, to prevent fraud by the Contractor's staff and the Contractor (including its shareholders, members and directors) in connection with the Contract and shall notify the Agency immediately if it has reason to suspect that any fraud has occurred or is occurring or is likely to occur.

18.3. If the Contractor or the Contractor's staff engages in conduct prohibited by this clause 18 or commits fraud in relation to the Contract or any other contract with the Crown (including the Agency) the Agency may:

18.3.1. terminate the Contract and recover from the Contractor the amount of any loss suffered by the Agency resulting from the termination, including the cost reasonably incurred by the Agency of making other arrangements for the supply of the Goods and any additional expenditure incurred by the Agency throughout the remainder of the Contract; or

18.3.2. recover in full from the Contractor any other loss sustained by the Agency in consequence of any breach of this clause.

18.4. The Contractor shall not, directly or indirectly through intermediaries commit any offence under the Bribery Act 2010 (as amended), in any of its dealings with the Agency.

19. MONITORING AND AUDIT

19.1. The Contract Supervisor may inspect and examine the Services being carried out on the Agency's premises, or elsewhere at any reasonable time. Where the Services are being performed on other than the Agency's premises, reasonable notice to inspect shall be given to the Contractor. The Contractor shall give all such facilities as the Contract Supervisor may reasonably require for such inspection and examination.

20. CONTRACT PRICE

20.1. The Contract Price will be paid by the Agency to the Contractor as amended by any Variations ordered under Condition 10 (Variations).

20.2. In addition to the Contract Price, the Agency will pay to the Contractor such Value Added Tax (if any) as may properly be chargeable at rates ruling at the time of invoice.

21. INVOICING AND PAYMENT

21.1. Invoices shall only be submitted for work already satisfactorily completed, and accompanied by such information as the Contract Supervisor may reasonably require to verify the Contractor's entitlement to payment. Such invoices will be paid in 30 days from receipt by the Agency.

21.2. If any sum is payable under the Contract by the Contractor to the Agency, whether by deduction from the Contract or otherwise, it will be deducted from the next available invoice.

21.3. If the Contractor enters into a sub-contract with a supplier for the purpose of performing its obligations under the Contract, it shall ensure that a provision is included in the sub-contract which requires payment to be made of all sums due from it to the sub-contractor within 30 days from the receipt of a valid invoice.

22. INTELLECTUAL PROPERTY RIGHTS

22.1. All Prior Rights used in connection with the Services shall remain the property of the party introducing them. Details of each party's Prior Rights are set out in the Prior Right Schedule to this contract.

22.2. All Results shall be the property of the Agency.

22.3. The Resulting Rights in any Results, and any interim results shall, from the time they arise, be the property of the Agency and the Agency shall be free, should it so wish, to apply at its own expense for patent or other protection in respect of the Results or any interim results. The Agency's intention to apply for such patent or other protection shall be notified to the Contractor. Such applications for patents or other registered intellectual property rights shall be filed in the name of the Agency.

Unless otherwise agreed in writing between the Contractor and the Agency, the Contractor hereby:

22.3.1. assigns to the Agency all Resulting Rights

22.3.2. grants the Agency a non-exclusive, non-transferable (save for the purposes of sub-licensing, reorganisation or transfer to a successor body, for the purposes of all the successor body's normal business use), irrevocable, royalty free perpetual licence to the Agency in respect of all the Contractor's Prior Rights necessary in order for the Agency to use or exploit the Resulting Rights.

22.4. The Contractor undertakes to the Agency not to use, exploit or deal with any of the Agency's Prior Rights, other than in the performance of the Contract unless the Contractor has first obtained a written licence from the Agency, in specific terms to do so.

22.5. The Agency undertakes to the Contractor not to use or exploit the Contractor's Prior Rights, save as provided in Condition 22.3.2.

22.6. The Contractor warrants to the Agency that the performance of the Services, the Contractor's Prior Rights and the Results shall not in any way infringe any intellectual property rights of any third party.

22.7. If the Contractor is prevented from carrying out his obligations under the Contract due to any infringement or alleged infringement of any Intellectual Property Rights, the Agency may without prejudice to any other rights and remedies under the Contract, exercise the powers and remedies available to it under Conditions 13 and 14, Termination and Determination respectively.

22.8. The Contractor shall not be liable if such infringement arises from the use of any design, technique or method of working provided by or specified by the Agency.

22.9. The Contractor waives in favour of the Agency its rights to object to derogatory treatment of the Results of the Work and the Contractor also agrees that he will not assert or seek to enforce against the Agency and/or any other person, firm or company any of its moral rights as defined in the Copyright Designs and Patents Act 1988 (as amended) without the prior agreement of the Agency.

22.10. The Contractor shall not be liable for any consequential losses, damage or injuries arising from third party misuse of the Results, of which the Contractor is not aware.

23. WARRANTY

The Contractor warrants that the Services supplied by him will be discharged with reasonable skill, care and diligence.

24. STATUTORY REQUIREMENTS

The Contractor shall fully comply with all relevant statutory requirements in the performance of the Contract, including, but not limited to the giving of all necessary notices and the paying of all fees.

25. ENVIRONMENT, SUSTAINABILITY AND DIVERSITY

25.1. The Contractor in the performance of this Contract should adopt a sound proactive environmental approach, designed to minimise harm to the environment, to conserve energy, water, wood, paper and other resources, reduce waste and phase out the use of single-use plastic, ozone depleting substances and minimise the release of greenhouse gases, volatile organic compounds and other substances damaging to health and/or the environment, and be able to provide proof of so doing to the Agency on demand.

25.2. The Agency is committed to ensuring that workers employed within its supply chains are treated fairly, humanely and equitably. The Agency expects the Contractor to share this commitment and to understand any areas of risk associated with this and work to ensure they are meeting International Labour Standards. The Contractor ensures that it and its sub-contractors and its supply chain:

25.2.1. comply with the provisions of the Modern Slavery Act 2015;

25.2.2. pay staff fair wages (and pays its staff in the UK not less than the Foundation Living Wage Rate); and

25.2.3. Implement fair shift arrangements, providing sufficient gaps between shifts, adequate rest breaks and reasonable shift length, and other best practices for staff welfare and performance.

25.3. The Contractor should support the Agency to achieve its Public Sector Equality Duty by complying with the Agency's policies (as amended from time to time) on Equality, Diversity and Inclusion (EDI). This includes ensuring that the Contractor (and their sub-contractors) in the delivery of its obligations under this Contract:

25.3.1. eliminates discrimination, harassment, victimisation and any other conduct that is prohibited by or under the Equality Act 2010;

25.3.2. advances equality of opportunity between people who share a protected characteristic and those who do not; and

25.3.3. fosters good relations between people who share a protected characteristic and those who do not.

25. PUBLICITY

The Contractor shall not advertise or publicly announce that he is supplying Services or undertaking work for the Agency without the Permission of the Contract Supervisor.

26. LAW

This Contract shall be governed and construed in accordance with the Law, and subject to the jurisdiction of the courts of England.

27. WAIVER

27.1. No delay, neglect or forbearance by the Agency in enforcing any provision of the Contract shall be deemed to be a waiver, or in any other way prejudice the rights of the Agency under the Contract.

27.2. No waiver by the Agency shall be effective unless made in writing.

27.3. No waiver by the Agency of a breach of the Contract shall constitute a waiver of any subsequent breach.

28. ENFORCEABILITY AND SURVIVORSHIP

28.1. If any part of the Contract is found by a court of competent jurisdiction or other competent authority to be invalid or legally unenforceable, that part will be severed from the remainder of the Contract which will continue to be valid and enforceable to the fullest extent permitted by law.

28.2. The following clauses shall survive termination of the Contract, howsoever caused: 13, 14, 15, 22, 23, 24, 27, 29, 30, 31, 32 and 33.

29. DISPUTE RESOLUTION

29.1. All disputes under or in connection with this agreement shall be referred first to negotiators nominated at a suitable and appropriate working level by the Agency and the Contractor.

29.2. If the parties' negotiators are unable to resolve the dispute within a period of forty five days from its being referred to them, the dispute shall be referred at the instance of either party to the parties' respective senior managers or directors (supported as necessary by their advisers).

29.3. If the parties' respective senior managers or directors are unable to resolve the dispute within forty five days the dispute shall be referred to the Centre for Dispute Resolution who shall appoint a mediator and the parties shall then submit to the mediator's supervision of the resolution of the dispute.

29.4. Recourse to this dispute resolution procedure shall be binding on the parties as to submission to the mediation but not as to its outcome. Accordingly all negotiations connected with the dispute shall be conducted in strict confidence and without prejudice to the rights of the parties in any future legal proceedings. Except for any party's right to seek interlocutory relief in the courts, no party may commence other legal proceedings under the jurisdiction of the courts or any other form of arbitration until forty five days after the appointment of the mediator.

29.5. If, with the assistance of the mediator, the parties reach a settlement, such settlement shall be put in writing and, once signed by a duly authorised representative of each of the parties, shall remain binding on the parties.

29.6. The parties shall bear their own legal costs of this dispute resolution procedure, but the costs and expenses of mediation shall be borne by the parties equally.

29.7. Any of the time limits in Conditions 30 may be extended by mutual agreement. Such agreed extension shall not prejudice the right of either party to proceed to the next stage of resolution.

30. GENERAL

30.1. Neither party to the Contract will be liable to the other for any delay in performing or failing to perform its obligations (other than a payment obligation) under the Contract because of any cause outside its reasonable control. Such delay or failure will not constitute a breach of the Contract and the time for performance of the affected obligation will be extended by a reasonable period.

30.2. The Contract contains the whole agreement between the parties and supersedes all previous communications, representations and arrangements, written or oral. It is accepted that the Contract has not been entered into on the basis of any representations that are not expressly contained in the Contract.

31. FREEDOM OF INFORMATION ACT

31.1. The Agency is committed to open government and to meeting its responsibilities under the Freedom of Information Act 2000 (as amended) ('Act') and the Environmental Information Regulations 2004 (as amended) (Regulations').

31.2. The Contractor agrees that:

31.2.1. All information submitted to the Agency may need to be disclosed by the Agency in response to a request under the Act or the Regulations; and

31.2.2. The Agency may include information submitted (in whole or in part) in the publication scheme which it maintains under the Act or publish the Contract, including from time to time agreed changes to the Contract, to the public.

31.3. If the Contractor considers that any of the information included in its tender, or that it has submitted to the Agency or that is otherwise contained in the Contract, is commercially sensitive, it shall identify and explain (in broad terms) what harm may result from disclosure if a request is received, and the time period applicable to that sensitivity. The Contractor acknowledges that if it has indicated that information is commercially sensitive, such information may still be required to be disclosed by the Agency under the Act or the Regulations. The receipt of any material marked 'confidential' or equivalent by the Agency shall not be deemed to infer that the Agency agrees any duty of confidentiality by virtue of that marking.

32. DATA PROTECTION

32.1. In the event that the Contract requires data to be processed within the meaning of the Data Protection Legislation the Data Protection Schedule shall be completed by the Parties and provisions and definitions therein shall apply and bind the Parties as part of this Contract.

33. BREAK CLAUSE

DEFINITION

33.1 Price – Means the price submitted by the Contractor as outlined in the pricing schedule.

33.2 Year – Means a financial year, which runs from 1 April to 31 March.

33.2 Subject to the Agency's full discretion, work scheduled to be completed in Year 2 of the contract (April 23 – Mar 24) shall follow the completion of Year 1 (up to the end of March 22). The Agency shall inform the Contractor by written communication, no later than 30 days prior to the start of the new Year, whether the Agency wishes to proceed with Year 2. The Consultant should respond within two weeks to confirm that they are able to undertake the work defined as Year 2, for the price submitted in their bid.

34.5 Following award for Year 1, the Contractor has submitted and the Agency has accepted the supply price for Year 2, should the later Year be required. No costs incurred up to and for works associated with Year 2 shall be chargeable to the Agency, should they decide not to proceed with Year 2.

Appendix to Conditions Services

Ref: [REDACTED]

Title: East Cheshire Aquifer Model Update

Condition

1 Contract Supervisor

3

[REDACTED]

Address:

[REDACTED]

2 Contractor

Groundwater Science Ltd

Address:

Windsor House,
Windsor Lane
Shrewsbury
SY1 2BY

3 Completion

6

Contract Start Date 03.01.2023

Contract End Date 31.03.2024

4 Delivery

11

Address:-

Insert delivery address if different to above

5 Insurance

17

Professional Indemnity Min. Cover £1 million

Third Party Minimum Cover £1 million

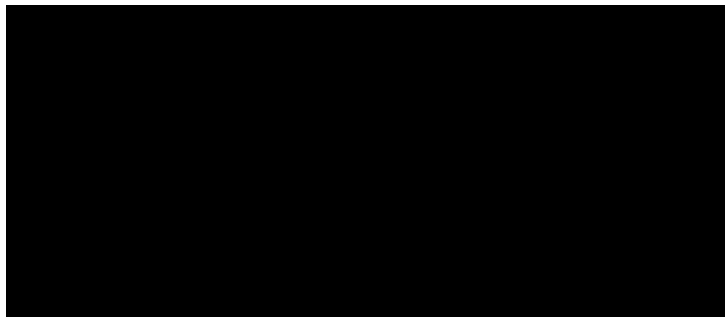
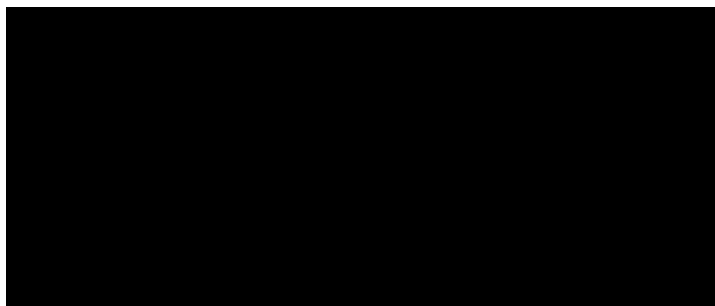
Public Liability Min. Cover £1 million

6 Limit on Liability

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Limit on Contractors Liability in clause 16. £ Three times the value of the contract as specified

Contract Signature Page



SCHEDULE 1 – SPECIFICATION

Specification of Requirement

Procurement Title: East Cheshire Aquifer Model Update

Procurement Reference Numbers: [REDACTED]

EA Project Reference: [REDACTED]

1.1 The Customer

The contract will be managed by the Environment Agency's (EA) Greater Manchester, Merseyside and Cheshire Area Environment Programme Team, the customer. The EA project manager will be supported by the Task Review Team, which will comprise of technical advisors in the EA Groundwater, and Contaminated Land Team (GWCL), along with partners from United Utilities and an External Peer Reviewer. The GWCL team is a multi-disciplinary team providing specialist technical support on water quality, water resources and land contamination. As well as providing support to area and national teams internally the team works with external stakeholders to undertake catchment based and scientific research-based projects in order to support the Agency's environmental goals.

GWCL sits within the Water Land and Biodiversity (WLB) Regulation department alongside Environment Management teams who lead on environmental incident response and permit compliance and enforcement.

The team are based at Richard Fairclough House, in Warrington, Cheshire.

1.2 Contract Length

It is anticipated that this contract will be awarded to one supplier to cover a period of up to 15 months to end no later than 31/03/2024. Any extension shall be agreed in advance of any work commencing and may be subject to further competition.

1.3 Project Manager

This contract shall be managed on behalf of the Agency by [REDACTED].

1.4 Requirement Statement

The EA is looking to procure one Contractor to deliver the requirements outlined in this Specification. A separate contract will be commissioned for an External Peer Reviewer, who will assist the EA and Contractor on the main contract with decision making and quality checks as part of the Task Review Team.

Contractors may bid for both the main contract and the External Peer Reviewer contract, however, as the External Peer Reviewer will be an independent person, they cannot be associated with the consultant that is successful in securing the main contract.

The EPR role will be tendered simultaneously (via a separate competitive process) with the main contract and will commence on 3rd January 2023, with a contract end date of 31st March 2024.

2004 East Cheshire Aquifer Model

The East Cheshire aquifer is part of the East Cheshire Permo-Triassic Sandstone aquifer system. The area mostly consists of a broad plain which is surrounded by the foothills of the Pennines to the north and east. This high ground is sharply incised by river valleys in places and all of the rivers in the area are tributaries of the River Mersey. Towards the west, the broad level valley of the River Mersey is characterised by the flat peatlands of Carrington Moss and Chat Moss. The area is highly urbanised around the Manchester conurbation but the southern part of the catchment, around East Cheshire, has a few towns and is more rural in nature.

The Sherwood Sandstone in the area is an important source of water for United Utilities Public Water Supply (PWS) abstractions as well as for a number of industrial and private abstractors. This is also the situation in the East Cheshire aquifer system which is in the southern part of this study area. Here the groundwater from the sandstone aquifer provides baseflow to the Dean and Bollin river systems with discharge occurring to the rivers via the overlying superficial deposits.

The East Cheshire aquifer groundwater model was originally completed in 2004 by Environmental Simulations International Limited (ESI Ltd) for the Environment Agency and covers the Dean and Bollin catchments – Southern and Cheadle Blocks, an area of approximately 160 km² from the River Mersey around Stockport southwards to the area around Alderley Edge and Macclesfield. It was created using MODFLOW96 and Groundwater Vistas modelling software to simulate groundwater flow and groundwater-

surface water interaction from 1970 to 2001. The model was set up to assess the groundwater resources in this area and the long-term reliability of water supply from the East Cheshire aquifer. The model is held on the National Groundwater Modelling System (NGMS).

The Environment Agency use the East Cheshire model for assessing the impact of groundwater abstractions, mostly Public Water System for United Utilities (UU), from the East Cheshire aquifer on surface water bodies.

Phase 1 of the 2004 model project developed a series of lumped water balances for the various sub areas, shown in Figure 1, to provide a context for licensing decisions and to feed into the Catchment Abstraction Management Strategies.

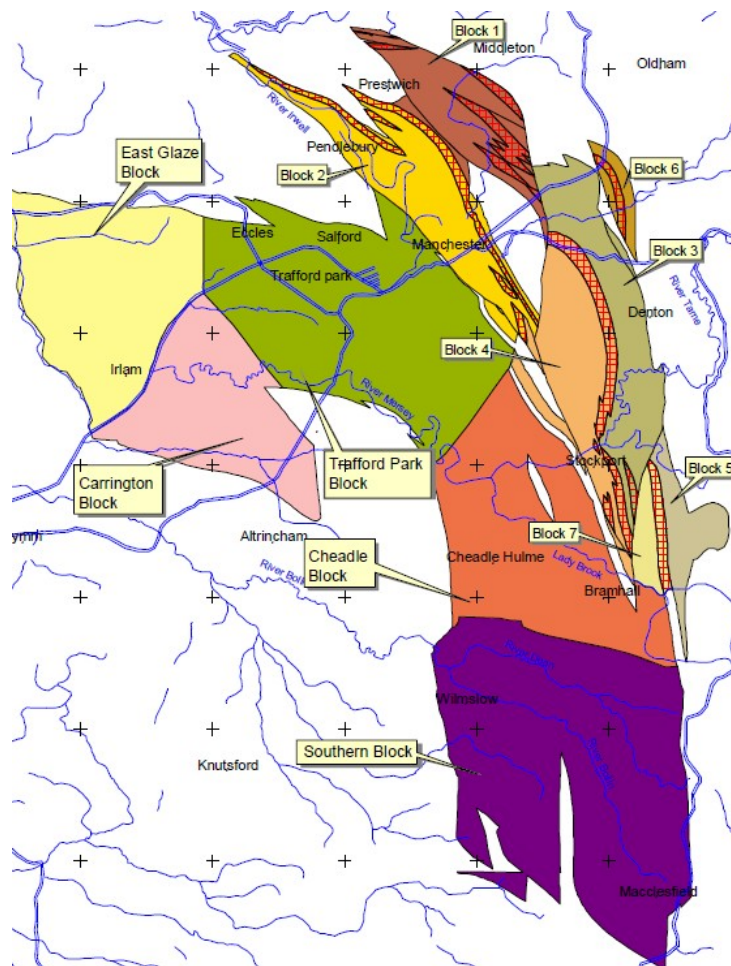


Figure 1: various sub areas for lump water balances

Phase 2 of the 2004 model project developed a numerical groundwater model of the Dean and Bollin catchments in the southern part of the study area shown as a grid in Figure 2. The groundwater model was only developed for the southern part of the study area for technical reasons: the groundwater discharge in the southern part of the study area could be constrained by measurements of the baseflow in the Rivers Dean and Bollin thus allowing a total water balance to be developed to support the conceptual model of this area; and the geology and hydrogeology of the northern part of the study area was considered to be too complex to develop a robust groundwater model on the basis of the data currently available.

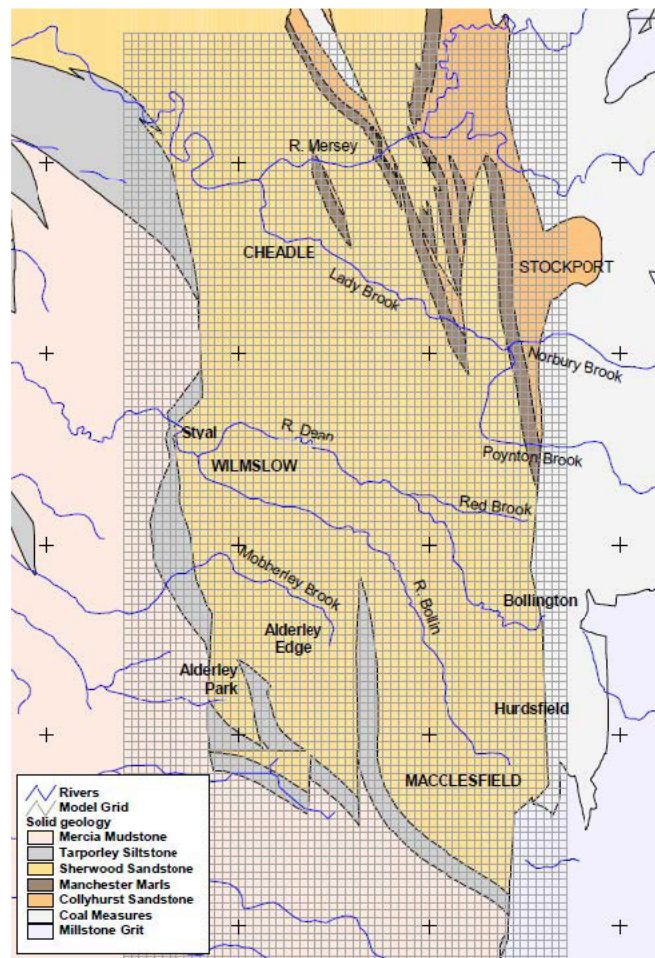


Figure 2: Study area for numerical model

The scope of this contract will focus on updating the groundwater and recharge models developed in Phase 2 of the 2004 project.

1.5 Estimated Timetable

Activity Ref	Activity Title	Date (Time)
1	Opportunity Notice published in Contracts Finder and Bidder Pack released	09 November 2022

Activity Ref	Activity Title	Date (Time)
2	Deadline for clarification questions	02 December 2022 (17:00)
3	Deadline for Responses	06 December 2022 (12:00)
4	Evaluation of Tender	13 December 2022
5	Contract award notification	14 December 2022
6	Contract start date	03 January 2023
7	Contract end date	31 March 2024

1.6 Objectives

The objectives of the work are:

- To review the 2004 East Cheshire Aquifer Model and agree and obtain the datasets to be used in the model upgrade
- To upgrade the model with meteorological, abstraction and hydrometric data time series data from 1970 to December 2021
- To agree other valuable upgrades to the Model with the Task Review Team and implement them
- To review, update and finalise the East Cheshire Aquifer Model Report – bringing the existing conceptual model up-to-date with current and updated data, literature and understanding.

1.7 Deliverables

The following table presents the outputs that are expected to be delivered at various stages as the project is being completed. Anticipated dates of completion after Contract Start are also provided as a guide, though these can be adjusted in the proposed project programme, which is requested in the Technical Questionnaire.

Tenderers should complete Task 1, 2 and as much as possible of task 3 before the end of this financial period (March 23).

Deliverable	Responsible parties	Anticipated date of completion after Contract Start
Provision of known project data sets	Agency	1 week

Data collection and processing including data QA	Contractor	1 month
Agreeing data sets to be used in model upgrade and issue identification	Contractor	3 months
Upgrades to recharge and groundwater model and model runs	Contractor	7 months
Model handover for quality assurance	Contractor/Agency	8 months
Predictive simulations and options appraisal	Contractor/Agency	10 months
Reporting and delivery of model files and supporting files	Contractor	13 months
Integration of the updated model to the EA's National Groundwater Modelling System (NGMS)	Contractor	14 months

All tools and files developed under this project should be compatible with the following Environment Agency's systems listed below and must be capable of functioning seamlessly with any future update of the applicable software products:

Software	Current Network Version
Windows Version	Windows 10
ArcGIS	ArcMap 10.4.1
Groundwater Vistas	Version 8.11 Build 11
Microsoft Office	Microsoft Office 365

Intellectual Property Rights

Background rights for all data and information used within the project(s) will be retained by the original owner. The Environment Agency will obtain foreground rights for the deliverables of the project, including the East Cheshire Aquifer Model Report, methodology and summary report(s), redacted reports, and any GIS shapefiles, mapping, spreadsheets

or metadata required to construct and maintain the model or used to present information in any of the reports.

1.8 Work scope summary

Task	Purpose	Overview	Outcomes/Outputs
<p>Task 1</p> <p>Data collection and processing including data QA</p>	<p>To review data currently in the model.</p> <p>To identify any data gaps.</p> <p>To acquire data needed to upgrade the model.</p> <p>To quality assure the data to ensure that it is reliable</p> <p>Understand what work has been completed to date and identify where upgrades are required.</p>	<p>As an absolute minimum (unless the Employer has agreed otherwise) the Contractor will be expected to have acquired, updated where necessary, inspected and quality assured the following data:</p> <ul style="list-style-type: none"> - East Cheshire aquifer groundwater model (Environmental Simulations International Limited) 2004 - Groundwater Level Measurements (AfA075) - data from EA Observation boreholes located within the East Cheshire Permo-Triassic Sandstone Aquifers. - Return data - records of actual surface water and groundwater abstraction (returns) for the current live licences - BGS Geology - Map layers including bedrock geology, superficial geology, artificial, linear and mass movement - BGS Superficial Thickness Model - Mapping layers showing modelled superficial geology thickness - NatMap Vector 	<p>Detailed understanding of data needs and work required to complete the model upgrade.</p>

Task	Purpose	Overview	Outcomes/Outputs
		<ul style="list-style-type: none"> - Subset of Water Resources GIS: database made up of many GIS layers that are a geographic representation of the Resource Assessment and Management (RAM) ledgers - Monitored river flow from four permanent gauging stations - Twelve rainfall stations in and around the model area - Land Use data – LCM (all years) - MOSES: EA Hybrid v1 PET (Options3), daily potential evapotranspiration data for the period 01/01/1961 to 31/12/2021 / MORECS Square 106 - 1km gridded rainfall derived from the Environment Agency Daily Rainfall Tool (DRT) for a predefined catchment area <p>Collate and process rainfall and PE data</p> <p>Inspect and quality assure data covering the period (1970 to December 2021) for existing datasets which will continue to be used in the new version of the model</p> <p>Update surface water abstractions and discharges</p>	

Task	Purpose	Overview	Outcomes/Outputs
		<p>Update groundwater abstractions</p> <p>Collate and process observed groundwater levels and flows</p> <p>The Contractor will need to make a judgement on the datasets to be used in the updated model and seek agreement from the Task Review Team.</p>	
<p>Task 2</p> <p>Agreeing data sets to be used in model upgrade and issue identification</p>	<p>To identify any issues with the recharge model or groundwater model that require rectifying.</p>	<p>Establish which gridded rainfall dataset, and PE dataset will be used to upgrade the recharge model.</p> <p>Make a judgement on the appropriateness of each dataset for the estimation of recharge, and make a recommendation to the Task Review Team.</p> <p>Suggestions for the most appropriate model upgrade options, for example grid size, shape and resolution, based on the data review.</p>	<p>Suggestions for the most appropriate model upgrade options, for example grid size, shape and resolution, based on the data review.</p> <p>The Contractor is to submit a brief report or technical note to the Task Review Team capturing their Recommendations for Task 3</p> <p>Any proposed upgrades to the recharge and groundwater model should be discussed with the Task Review Team before being incorporated in the model upgrade</p>
<p>Task 3</p> <p>Upgrades to recharge and groundwater model and model runs</p>	<p>To complete the agreed recommendations for upgrades following Task 2</p> <p>To test the model sensitivity to changes in key parameters</p>	<p>Upgrades <u>could</u> include upgrading recharge model, upgrading groundwater model to newer version of MODFLOW and developing an unstructured grid amongst other suggestions to improve performance.</p> <p>Any proposed upgrades to the recharge and groundwater model should be discussed with the Task Review Team before being incorporated in the model upgrade.</p> <p>Run the following scenarios;</p>	<p>Upgraded combined model (both runoff-recharge model and groundwater model) following agreements with the Task Review Team.</p> <p>Comprehensive comparisons between field and modelled results will be made.</p> <p>These will include, but are not limited to:</p> <p>Groundwater Heads</p>

Task	Purpose	Overview	Outcomes/Outputs
		<ul style="list-style-type: none"> - Calibrated historic - Naturalised - Recent Actual - Fully Licensed <p>The Contractor shall maintain an audit of all refinement runs and shall keep the Environment Agency informed of any problems or successes</p> <p>Sensitivity testing of the model results (outputs) based on varying key parameters such as hydraulic conductivity, river conductance, storage and specific yield, recharge and hydraulic conductivity vs. Recharge.</p> <p>Appropriate numerical convergence criteria in terms of both head and flow will be agreed in consultation with the Environment Agency. Typical values from previous modelling projects are given as guidance: a maximum head difference of around 10-4 m at any node and a flow imbalance of no more than 0.1% of the recharge at any node.</p>	<ul style="list-style-type: none"> - Maps and cross-sections of groundwater heads - Hydrographs of groundwater heads - Horizontal and vertical head gradients <p>Groundwater-surface water interaction</p> <ul style="list-style-type: none"> - Spring and river flow hydrographs - River flow accretion diagrams - Plots showing gaining and losing reaches of streams <p>Water Balances (both total and groundwater independently)</p> <ul style="list-style-type: none"> - Long-term average water balances for all components of the water budget - Time series of components of the water budget for the whole catchment and appropriate sub-catchments
Task 4 Model handover for	The quality assurance of the model prior to performing predictive simulations and	Provide the Environment Agency with electronic deliverables to be uploaded to EA computer systems in the structure agreed.	As a minimum, the following data will be required:

Task	Purpose	Overview	Outcomes/Outputs
quality assurance	options appraisal and prior to writing up final deliverables	<p>Provide the Environment Agency with comprehensive meta data explaining directory structure and function/purpose of files.</p> <p>All important simulations of the model (calibrated historic, naturalised, recent actual, and fully licensed) will be tested using Environment Agency compiled executables and computers. This will involve both pre and post-processing of the main input and output data. The Contractor will assist with this, but the running of the simulations will be done by Environment Agency staff. The main test will be comparison of total flow balances of the Environment Agency simulations with the simulations performed by the Contractor.</p>	<ul style="list-style-type: none"> - All main pre and post-processing files, including any source code; - All input and output files of the main model simulations: <ul style="list-style-type: none"> o Historic run, o Naturalised run, o Recent actual run, o Fully licensed run. - Outputs showing the effectiveness of the calibration e.g. contour plots of calibration errors with metadata explaining why some areas calibrate less well. - Any other important data sets used to display model outputs generated for this task. These could include GIS datasets, for example polygons used for property zones in the model. <p>Model signed off by the EA and approval from the EA to continue with final deliverables</p>
Task 5 Predictive simulations and options	To scenario test the model and provide the Agency with the results of the scenario tests so that they can better plan for sustainable abstraction and be	Predictive scenario modelling to agreed changes in key mechanisms or parameters. This would include running 10 potential 'what if' predictive scenarios. The details of these predictive scenarios will be finalised later by the Task Review Team .	<p>Updated and validated datasets supporting the whole model to December 2021.</p> <p>Updated all pre-and post-processing spreadsheets, recharge and MODFLOW input files and output files</p>

Task	Purpose	Overview	Outcomes/Outputs
appraisal	better prepared for future scenarios.	The Contractor shall maintain an audit of all refinement runs and shall keep the Environment Agency informed of any problems or successes	that all run on Environment Agency system. Geographical Information Systems (GIS) data sets. GIS tools to delineate the surface waterbody WFD flow compliance bands.
<p><i>Task 6</i></p> <p>Reporting and delivery of model files and supporting files</p>	<p>Following the successful completion of Task 5, the Contractor shall produce a final report which would be suitable for presentation at a Public Inquiry.</p> <p>The Contractor shall also issue an additional pdf version for external use that has been redacted of all sensitive information. The Contractor should also provide a list of all redactions in the redacted version of the report.</p>	<p>The final report should cover all aspects of the upgrade. The Contractor shall agree with the Environment Agency Project Manager about the exact contents of the report prior to the end of Task 4. It is not expected that the sections describing the conceptual model will be extensively rewritten, although amendments will be required to reflect the expected enhancement of the conceptual understanding when the combined model is completed.</p> <p>This will be an Environment Agency report, written by the Contractor on our behalf, and therefore may require the incorporation of material or information external to this Task but needed by the Environment Agency. All such additional information will be provided by the Environment Agency. The report shall require a greater level of interchange between the Contractor and the Environment Agency, and as such the Contractor should anticipate at least three draft versions of the report. The title of the draft reports shall reflect the draft version number.</p> <p>Following the approval by the Agency Project</p>	<p>As a minimum the report shall incorporate the following:</p> <ol style="list-style-type: none"> 1. A brief description of the catchments of the model area and the various issues for long-term management; 2. The purpose of the model upgrade and the specific modelling objectives; 3. A summary of the model upgrade. The work undertaken, assumptions and simplifications employed and their rationale. The limitations of the model must be clearly stated. There should be sufficient detail in associated appendices for the Environment Agency modelling staff to be able to repeat any model simulation run by the Contractor; 4. High level description of the derivation of the run parameters 5. Exception reporting (describe what non-standard things have been done to build or run or post process the model). Describe any other criteria used to improve the final results.

Task	Purpose	Overview	Outcomes/Outputs
		<p>Manager, assisted by the Task Review Team, that further drafts are not required, the Contractor shall issue within 15 days of approval a well-linked pdf version of the report, along with a second version that has been redacted of all sensitive information and is suitable for external circulation.</p>	<ol style="list-style-type: none"> 6. Describe what, where and when the model is sensitive to as highlighted by the sensitivity analysis to give an idea of the robustness of the model; 7. Provide a list of the final design runs, together with where the result files can be found. Ensure that this list acknowledges where specific model runs have been combined to achieve the final products; 8. Provide a summary of results. These should be selected to represent the purpose of the report. 9. Implications for management from the main scenarios; 10. Detailed discussion of issues requiring further work to improve the conceptual understanding and model performance. This should include the benefits that could be achieved and any areas that might not have been prioritised for practical reasons during the development of the model. <p>It should be noted that the standards of reporting should be high, with the final report including:</p> <ul style="list-style-type: none"> • Well formatted tables and headings; • Scales for maps and graphs;

Task	Purpose	Overview	Outcomes/Outputs
			<ul style="list-style-type: none"> • A glossary of agreed technical terms. <p>Unclear, imprecise or loose technical/scientific terminology will not be acceptable.</p> <p>Electronic deliverables</p> <p>A large amount of electronic data will be collected and processed. It will be expected that the processed data sets will be handed over to the Environment Agency at the end of the project. The format of these processed data sets (in particular annotation in complex spreadsheets) will be agreed with the Task Review Team.</p> <p>All electronic deliverables will be required for future work, specifically for pre and post-processing for regional groundwater modelling and Catchment Abstraction Management Strategy (CAMS). Consideration to the final formats will be agreed with the Task Review Team.</p> <p>A single electronic deliverable that has been quality assured should be produced before the end of February 2024. The deliverable should have an extensive set of 'README' files detailing the exact content and purpose of every file. The Environment Agency will quality assure this deliverable. If this is found to be incomplete, or any files are corrupted, the Contractor will be required to reissue the entire electronic deliverable</p>

Task	Purpose	Overview	Outcomes/Outputs
			<p>Electronic deliverables will be accepted in the following formats (should be compatible to Environment Agency computer systems):</p> <ul style="list-style-type: none"> • ArcView; • Surfer; • Excel; • Formatted ASCII data files. <p>The following data will be required as a minimum:</p> <ul style="list-style-type: none"> - all surface water and groundwater abstraction and surface water discharge data; - all compiled and quality assured groundwater hydrometric data; - all compiled and quality assured surface water hydrometric data including spot gauging data; - all groundwater level contour maps; - all input and output for the calculation of potential and actual recharge, including any derived spatial distribution maps associated with input parameters for the calculation; - all input and output of the water balance calculations; - all pre-post processing 4R and MODFLOW data including utilities;

Task	Purpose	Overview	Outcomes/Outputs
			<ul style="list-style-type: none"> - all input and outfiles of 4R and MODFLOW including executive files; - Recharge and Natural Summer Outflows (NSO, Q85) for each Groundwater Management Unit and Groundwater Body and total flows for each Surface Water Body; - Geographical Information Systems (GIS) data sets of the model files; - All model files spreadsheets used to construct and maintain the model & metadata etc. - GIS tools to delineate the surface waterbody WFD flow compliance bands for the Recent actual and Fully Licensed standard scenario runs. - All electronic data should be in an agreed format and should not contain any superfluous files and/or temporary files. <p>Three months following completion of the project (planned for March 2024) the Environment Agency will instruct the Contractor to delete all electronic files with this Task from its systems. Until this time, the Contractor should maintain an electronic archive of the work performed under this Task. The Contractor should not use any data associated with this Task for any other purpose unless requested by the Environment Agency.</p>

Task	Purpose	Overview	Outcomes/Outputs
<p><i>Task 7</i></p> <p>Integration of the upgraded model to the EA's National Groundwater Modelling System (NGMS)</p>	<p>The provision of the main scenarios of the final combined model (both runoff-recharge model and groundwater model) for installation onto EA computer systems will be the main electronic deliverable of Task 7. The model will be provided in forms compatible with existing EA software, these include:</p> <ol style="list-style-type: none"> 1. NGMS Recharge configuration 2. NGMS MODFLOW Configuration 	<p>The cost for transferring both the runoff-recharge model and groundwater model into NGMS should be costed under this task. Currently there is no runoff-recharge model for East Cheshire, therefore the relevant files for input to NGMS will be created. The Contractor will be responsible to ensure that all the relevant files in the NGMS for the recharge model and MODFLOW model are updated and fully functional.</p> <p>Abstractions in the model should include both abstraction name and licence number. Accretion profiles should be labelled so the cause of any significant changes in flow can be understood. The Contractor will be responsible to ensure the new updated NGMS configuration is error free and fully functional. EA staff will undertake internal checks to ensure the configuration is correct and that the same outputs are generated by the MODFLOW model and NGMS. If any errors are identified the Contractor will be required to fix them.</p> <p>The transfer of the model will consist of:</p> <ol style="list-style-type: none"> 1. Creating and updating all the existing spreadsheets, xml files (two copies of the files are required – one containing all the files, and another containing only the files that have been updated) and folders for input to NGMS; 	<p>A working and fully functional configuration of the recharge-runoff and groundwater model in NGMS that is accepted by the EA.</p>

Task	Purpose	Overview	Outcomes/Outputs
		<ol style="list-style-type: none"> 2. Creation of the relevant spreadsheets, xml files and folders of runoff-recharge model for input to NGMS; 3. Providing a copy of the NGMS model which has been fully tested with outputs to prove it. This will then be uploaded to the NGMS test and production systems by EA staff for testing. 4. Writing of a model summary for NGMS website. 	

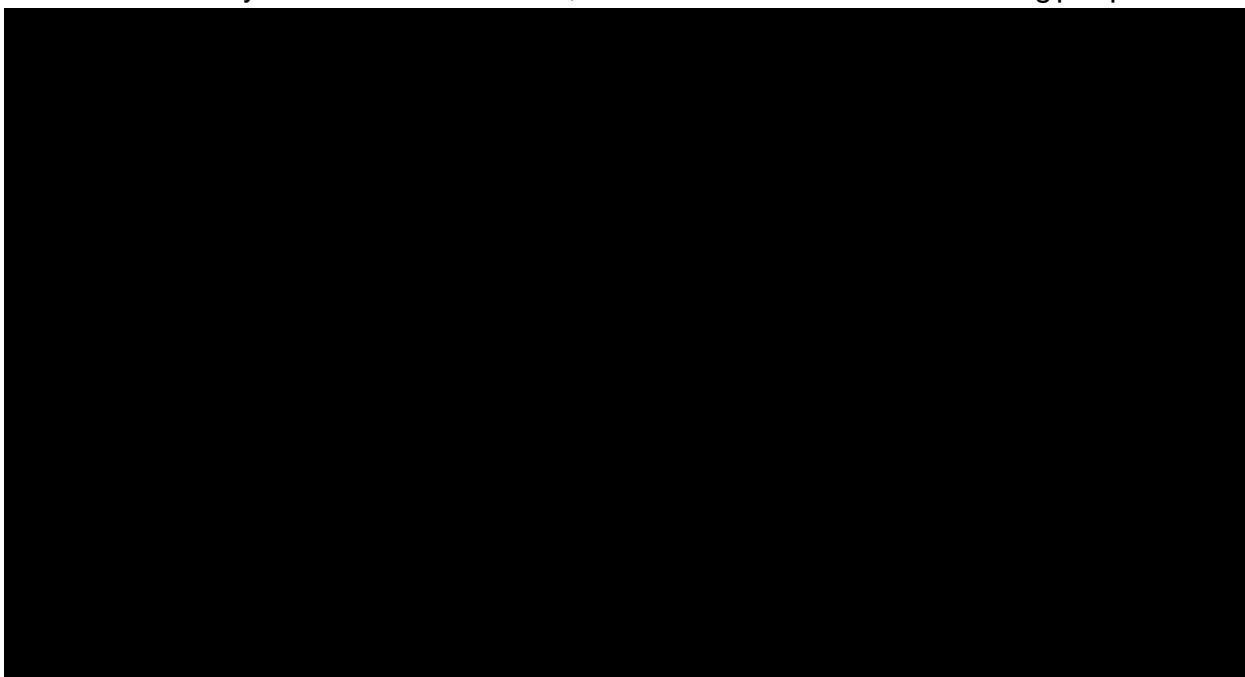
1.9 Task Review and Meetings

Task meetings will form the principal method of project review. We anticipate the need for a minimum of **eight** throughout the Project, including both a start-up and close-out meeting. All of these meetings shall be organised by the Contractor and held on-line using MS Team or similar. If the Contractor anticipates the need for further meetings, justification and costs should be provided in their bid.

The Contractor will be responsible for the taking of minutes during all meetings. These should be provided to the Environment Agency Project Manager within three days of the meeting for review prior to circulation to the wider project team.

The Contractor is required to provide written monthly updates to the Environment Agency Project Manager which should detail progress and spend to date. These should be provided within five working days of the end of the month. Technical issues should be raised with the Project Manager (and Task Review Team as appropriate) as they arise so as not to create delays to the project.

To ensure that the work is completed to a sufficiently high standard, the Task work will be monitored by a Task Review Team, which will consist of the following people:



The primary Environment Agency contact for the Contractor for this project will be the Project Manager, [REDACTED]

1.10 Data Available

A significant amount of data, information and literature are available to support completion of the required work. Some of this data will be obtained directly from the Agency, whilst other data sets will require downloading from Defra Data Services Platform, selecting user-type 'Defra-Body Contractor'. The Contractor can then search for, access and download a wealth of Environment Agency datasets (including partner datasets) for use in the Project. Licence conditions for the dataset are accessible via the dataset page. Before using the data, the Contractor must ensure that they access and thoroughly read all conditions relating to the data, and ensure the conditions on use are suitable for their purposes. If they are not, the information is not provided with a licence for use, and is provided for read right only. The Contractor must ensure they are logged-in in order to see and access partner datasets, and in order to view the widest range of data available to our Contractors. When accessing Partner Datasets, the request will be sent to the project manager (Adam Chapman) for approval before the Contractor may download the data. The data required for the Project includes but is not limited to:

Information	Format
ESI, 2003. Manchester and East Cheshire Water Resources Study. Phase I Conceptual Model and Water Balances. Report Reference 6184aR1	PDF
ESI, 2004. Manchester and East Cheshire Water Resources Study: Phase 2 - Groundwater Model of the Southern Area (Dean and Bollin Catchments). Report Reference 6184aR2	PDF
ESI, 2003. Manchester and East Cheshire Water Resources Study - User Guide - Groundwater Model of the Southern Area (Dean and Bollin Catchments). Report Reference 6184a TN1D2	PDF
East Cheshire aquifer groundwater model (Environmental Simulations International Limited) 2004	TBC
Groundwater Level Measurements (AfA075) - data from EA Observation boreholes located within the East Cheshire Permo-Triassic Sandstone Aquifers.	
Return data - records of actual surface water and groundwater abstraction (returns) for the current live licences	TBC
BGS Geology - Map layers including bedrock geology, superficial geology, artificial, linear and mass movement	TBC
BGS Superficial Thickness Model - Mapping layers showing modelled superficial geology thickness	TBC
NatMap Vector	TBC
Subset of Water Resources GIS: database made up of many GIS layers that are a geographic representation of the Resource Assessment and Management (RAM) ledgers	TBC
Monitored river flow from four permanent gauging stations	TBC
Twelve rainfall stations in and around the model area	TBC
Land Use data – LCM (all years)	TBC
MOSES: EA Hybrid v1 PET (Options3), daily potential evapotranspiration data for the period 01/01/1961 to 31/12/2021 / MORECS Square 106	TBC
1km gridded rainfall derived from the Environment Agency Daily Rainfall Tool (DRT) for a predefined catchment area	TBC

2.0 Pricing and Payment Strategy

The pricing strategy for this project will be fixed price. The dates of the payment milestones will be established in the tender process and by the programme of works submitted by the successful bidder.

The pricing schedule will comprise fixed priced daily inputs from named staff, to deliver each task. Payment will be made to the successful bidder after receipt and acceptance of the agreed deliverables by the Environment Agency Project Manager.

2.1 Project Management and Governance

Project Management Requirements:

- Produce a monthly project risk/issues register and update (including Contractor risk budget).
- Attend a start-up meeting within 2 weeks of contract award. This meeting should be via video conference.
- Attend progress meetings and draft record minutes, the Agency to issue.
- Produce monthly financial updates and forecasts meeting the Agency's project reporting timetable together with progress reports.
- Deliver a monthly progress update giving progress against programme, deliverables received and expected and financial summary against programme.
- Produce a short technical summary from consideration of previous investigations and surveys, explaining how best use will be made of historical data.
- Ensure that all the original data sent to the Contractor by the Agency in an encrypted format (using WinZip 128 bit encryption), which is classed as commercially sensitive, is returned to the Agency in an encrypted format using WinZip 128 bit encryption.
- Ensure that project deliverables classed as commercially sensitive, or of a personal nature, is returned to the Agency in an encrypted format using WinZip 128 bit encryption.
- Deliver a copy of all models, data etc, and supporting detailed technical reports. The Contractor will take the risk of the adequacy of existing data quality and quantity.

2.2 Skills of Personnel Required

Essential Skills and Experience:

- Hydrogeologist(s) with a minimum of 3 years work experience to undertake key technical tasks, apart from data collation and GIS work. Individuals

should be qualified to at least degree standard (or equivalent) in a relevant discipline.

- GIS, experience of producing and manipulating shapefiles and figures using ArcMap and other similar packages.
- Analysis of groundwater data– ability to interpret geological and hydrogeological data, particularly to turn large data sets into meaningful summaries of risks and issues.
- Geochemistry – a good understanding of aquifer processes, with the ability to explain the mechanisms behind geological and hydrogeological systems.
- Groundwater Modelling – experience of reviewing and producing conceptual and numerical groundwater models. Experience of a range of modelling packages.
- Data management – proven track record of record keeping, basic database and spreadsheet management
- Excellent verbal and written communication skills, along with a passion for problem solving and delivering outcomes and the ability to work relatively independently. Experience of writing technical reports for technical and non-technical audiences

Desirable Skills and Experience

- Chartered member of a relevant organisation
- Experience of reviewing and analysing abstraction and pump test data
- An understanding of environmental legislation relating to groundwater such as Water Framework Directive, Abstraction Licensing Regime, Environmental Protection Act and Environmental Permitting Regulations

2.3 Working Arrangements

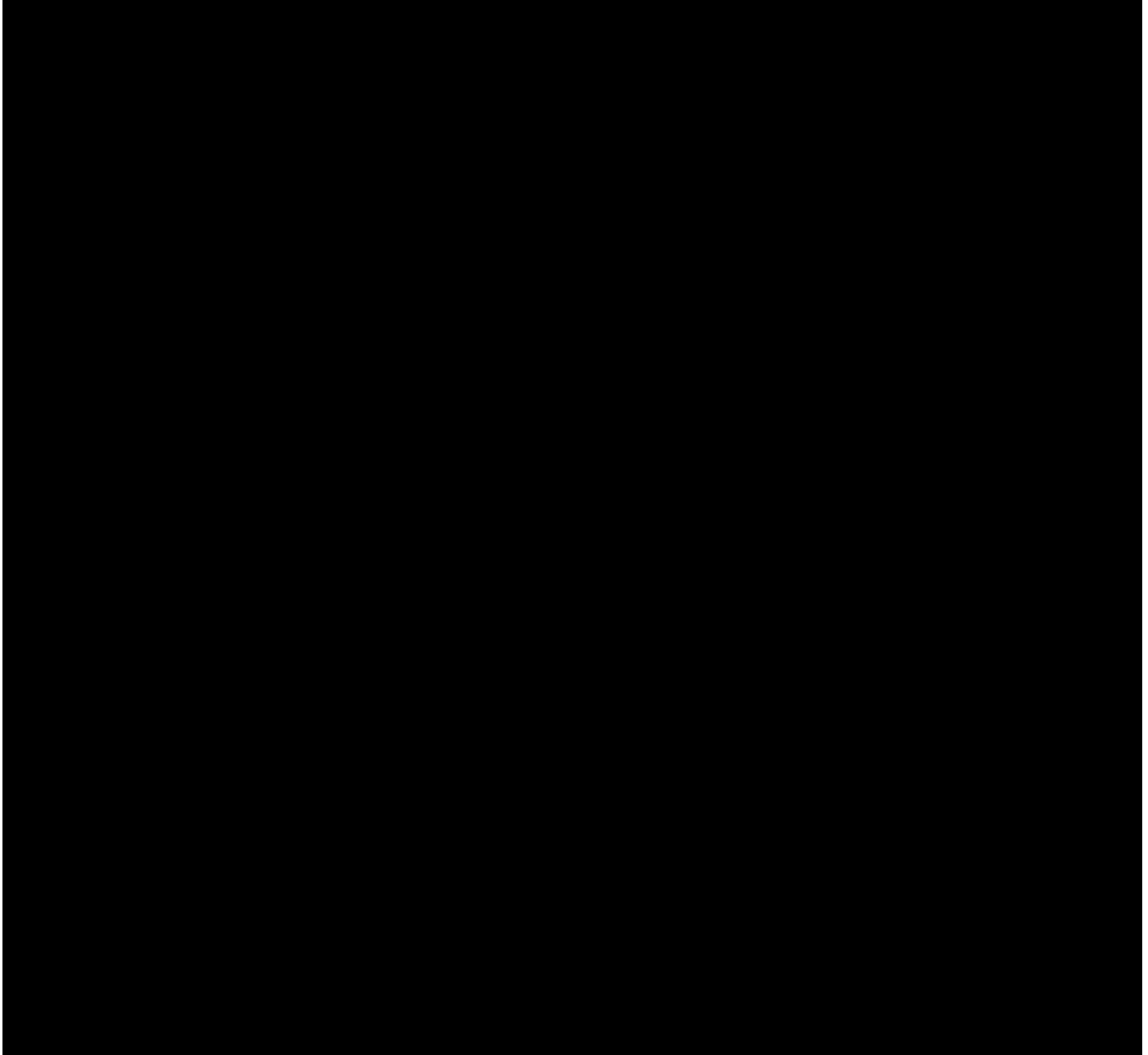
Copies of all relevant documents and data required to undertake the work will be provided by the Agency's Project Manager. Direct access to Environment Agency IT systems will not be possible.

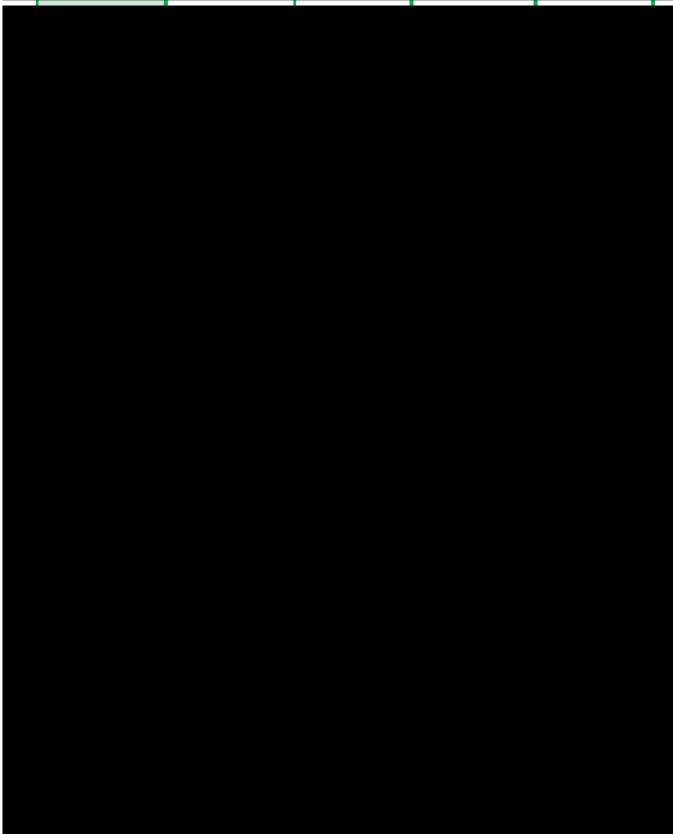
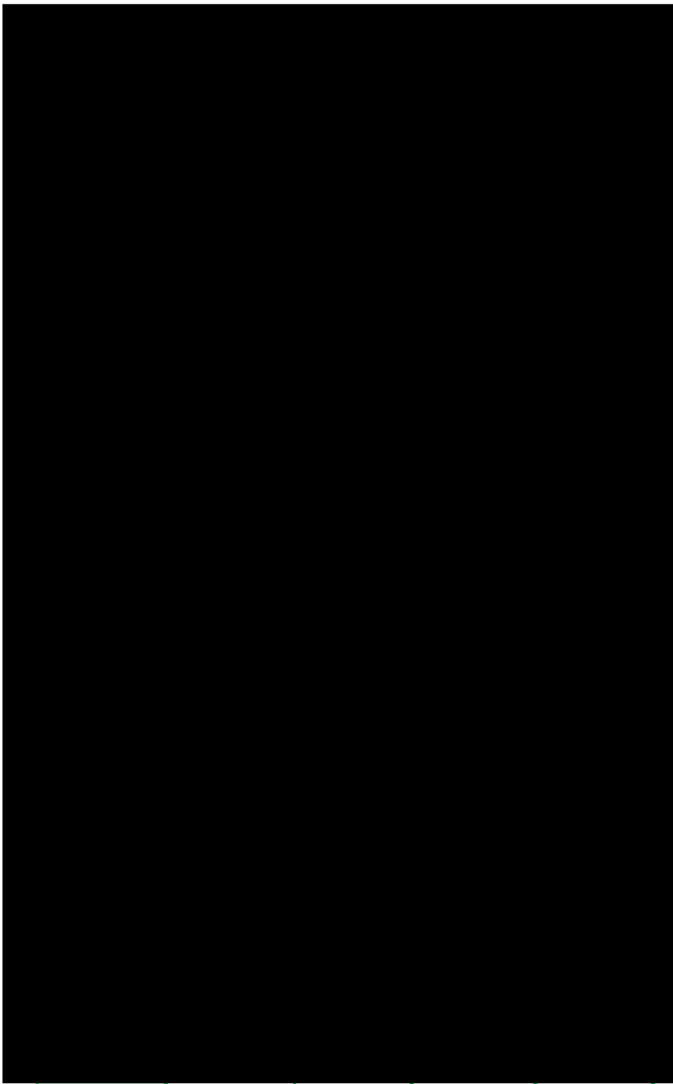
Work can be undertaken on any day of the week, though Monday to Friday is preferred.

Communication between the Agency and Contractor will be via e-mail, webex and/or MS Teams. Large documents are expected to be transferred via Sharefile or similar. The Contractor will need their own access to Microsoft Office including Excel, Word and PowerPoint, ArcMap, a contouring package that can produce GIS shapefiles and ideally Surfer and a package that can create piper diagrams. There will no direct access to the Agency's internal IT systems though files and data will be supplied as required.

SCHEDULE 2 – RESOURCE AND PRICING

The price due to the Contractor in consideration of the Services is £68,056.00 ex VAT.





SCHEDULE 3 – CHANGE CONTROL NOTE



Department
for Environment
Food & Rural Affairs

CONTRACT CHANGE NOTE

Contract Change Note Number	
Contract Reference Number and Title	
Variation Title	
Number of Pages	

Whereas the [Contractor] and the Authority entered into a Contract for the provision of [contract title] dated [dd/mm/yyyy] (the "Original Contract") and now wish to amend the Original Contract.

It is agreed as follows:

1. With effect from [dd/mm/yyyy] the Original Contract shall be amended as set out in this Contract Change Note:

Change Requestor / Originator		
Summary of Change		
Reason for Change		
Revised Contract Price	Original Contract Value	£
	Previous Contract Changes	£
	Contract Change Note [x]	£
	New Contract Value	£
Revised Payment Schedule		
Revised Specification (see Annex A)		
Revised Contract Period		
Change in Contract Manager(s)		
Other Changes		

2. Save as herein amended all other terms and conditions of the Original Contract shall remain in full force and effect.

Execution of the Contract Change Note is carried out in accordance with EU Directive 99/93 (Community framework for electronic signatures) and the Electronic Communications Act 2000. The revised Contract is formed on the date on which both Parties communicate acceptance of its terms on the Authority's electronic contract management system ("Bravo").

SCHEDULE 4 – DATA PROTECTION

Schedule 4 – Data Protection

Definitions – the definitions in this Schedule and the Contract shall apply:

Annex 1: the Schedule of Processing, Personal Data and Data Subjects attached to this Data Protection Schedule.

Annex 2: Joint Controller Agreement (where required).

Party: a Party to this Contract.

Data Protection Impact Assessment: an assessment by the Controller of the impact of the envisaged processing on the protection of Personal Data.

Controller, Processor, Data Subject, Personal Data, Personal Data Breach, Data Protection Officer: takes the meaning given in the GDPR.

Data Loss Event: any event that results, or may result, in unauthorised access to Personal Data held by the Processor under this Contract, and/or actual or potential loss and/or destruction of Personal Data in breach of this Contract, including any Personal Data Breach.

Data Subject Request: a request made by, or on behalf of, a Data Subject in accordance with rights granted pursuant to the Data Protection Legislation to access their Personal Data.

Joint Controllers: where two or more Controllers jointly determine the purposes and means of processing. **Protective Measures:** appropriate technical and organisational measures which may include: the use of pseudonyms and encrypting Personal Data, ensuring confidentiality, integrity, availability and resilience of systems and services, ensuring that availability of and access to Personal Data can be restored in a timely manner after an incident, and regularly assessing and evaluating the effectiveness of the such measures adopted by it including those outlined in Annex 1 (Security).

Sub-processor: any third Party appointed to process Personal Data on behalf of the Processor related to this Contract.

1. DATA PROTECTION

- 1.1 The Parties acknowledge that for the purposes of the Data Protection Legislation, the Agency is the Controller and the Contractor is the Processor unless otherwise specified in Annex 1. The only processing that the Processor is authorised to do is listed in Annex 1 by the Controller and may not be determined by the Processor.
- 1.2 The Processor shall notify the Controller immediately if it considers that any of the Controller's instructions infringe the Data Protection Legislation.

- 1.3 The Processor shall provide all reasonable assistance to the Controller in the preparation of any Data Protection Impact Assessment prior to commencing any processing. Such assistance may, at the discretion of the Controller, include:
- (a) a systematic description of the envisaged processing operations and the purpose of the processing;
 - (b) an assessment of the necessity and proportionality of the processing operations in relation to the Services;
 - (c) an assessment of the risks to the rights and freedoms of Data Subjects; and
 - (d) the measures envisaged to address the risks, including safeguards, security measures and mechanisms to ensure the protection of Personal Data.
- 1.4 The Processor shall, in relation to any Personal Data processed in connection with its obligations under this Contract:
- (a) process that Personal Data only in accordance with Annex 1, unless the Processor is required to do otherwise by Law. If it is so required the Processor shall promptly notify the Controller before processing the Personal Data unless prohibited by Law;
 - (b) ensure that it has in place Protective Measures, which are appropriate to protect against a Data Loss Event, which the Controller may reasonably reject (but failure to reject shall not amount to approval by the Controller of the adequacy of the Protective Measures), having taken account of the:
 - (i) nature of the data to be protected;
 - (ii) harm that might result from a Data Loss Event;
 - (iii) state of technological development; and
 - (iv) cost of implementing any measures;
 - (c) ensure that :
 - (i) the Contractor Personnel do not process Personal Data except in accordance with this Contract (and in particular Annex 1);
 - (ii) it takes all reasonable steps to ensure the reliability and integrity of any Contractor Personnel who have access to the Personal Data and ensure that they:
 - (A) are aware of and comply with the Processor's duties under this clause;
 - (B) are subject to appropriate confidentiality undertakings with the Processor or any Sub-processor;

- (C) are informed of the confidential nature of the Personal Data and do not publish, disclose or divulge any of the Personal Data to any third Party unless directed in writing to do so by the Controller or as otherwise permitted by this Contract; and
 - (D) have undergone adequate training in the use, care, protection and handling of Personal Data; and
- (d) not transfer Personal Data outside of the EU unless the prior written consent of the Controller has been obtained and the following conditions are fulfilled:
 - (i) the Controller or the Processor has provided appropriate safeguards in relation to the transfer (whether in accordance with GDPR Article 46 or LED Article 37) as determined by the Controller;
 - (ii) the Data Subject has enforceable rights and effective legal remedies;
 - (iii) the Processor complies with its obligations under the Data Protection Legislation by providing an adequate level of protection to any Personal Data that is transferred (or, if it is not so bound, uses its best endeavours to assist the Controller in meeting its obligations); and
 - (iv) the Processor complies with any reasonable instructions notified to it in advance by the Controller with respect to the processing of the Personal Data;
- (e) at the written direction of the Controller, delete or return Personal Data (and any copies of it) to the Controller on termination of the Contract unless the Processor is required by Law to retain the Personal Data.

1.5 Subject to clause 1.6, the Processor shall notify the Controller immediately if it:

- (a) receives a Data Subject Request (or purported Data Subject Request);
- (b) receives a request to rectify, block or erase any Personal Data;
- (c) receives any other request, complaint or communication relating to either Party's obligations under the Data Protection Legislation;
- (d) receives any communication from the Information Commissioner or any other regulatory authority in connection with Personal Data processed under this Contract;
- (e) receives a request from any third Party for disclosure of Personal Data where compliance with such request is required or purported to be required by Law; or
- (f) becomes aware of a Data Loss Event.

- 1.6 The Processor's obligation to notify under clause 1.5 shall include the provision of further information to the Controller in phases, as details become available.
- 1.7 Taking into account the nature of the processing, the Processor shall provide the Controller with full assistance in relation to either Party's obligations under Data Protection Legislation and any complaint, communication or request made under clause 1.5 (and insofar as possible within the timescales reasonably required by the Controller) including by promptly providing:
- (a) the Controller with full details and copies of the complaint, communication or request;
 - (b) such assistance as is reasonably requested by the Controller to enable the Controller to comply with a Data Subject Request within the relevant timescales set out in the Data Protection Legislation;
 - (c) the Controller, at its request, with any Personal Data it holds in relation to a Data Subject;
 - (d) assistance as requested by the Controller following any Data Loss Event;
 - (e) assistance as requested by the Controller with respect to any request from the Information Commissioner's Office, or any consultation by the Controller with the Information Commissioner's Office.
- 1.8 The Processor shall maintain complete and accurate records and information to demonstrate its compliance with this clause. This requirement does not apply where the Processor employs fewer than 250 staff, unless:
- (a) the Controller determines that the processing is not occasional;
 - (b) the Controller determines the processing includes special categories of data as referred to in Article 9(1) of the GDPR or Personal Data relating to criminal convictions and offences referred to in Article 10 of the GDPR; or
 - (c) the Controller determines that the processing is likely to result in a risk to the rights and freedoms of Data Subjects.
- 1.9 The Processor shall allow for audits of its Data Processing activity by the Controller or the Controller's designated auditor.
- 1.10 Each Party shall designate its own data protection officer if required by the Data Protection Legislation.
- 1.11 Before allowing any Sub-processor to process any Personal Data related to this Contract, the Processor must:

- (a) notify the Controller in writing of the intended Sub-processor and processing;
 - (b) obtain the written consent of the Controller;
 - (c) enter into a written agreement with the Sub-processor which gives effect to the terms set out in this Schedule such that they apply to the Sub-processor; and
 - (d) provide the Controller with such information regarding the Sub-processor as the Controller may reasonably require.
- 1.12 The Processor shall remain fully liable for all acts or omissions of any of its Sub-processors.
- 1.13 The Controller may, at any time on not less than 30 Working Days' notice, revise this clause by replacing it with any applicable controller to processor standard clauses or similar terms forming part of an applicable certification scheme (which shall apply when incorporated by attachment to this Contract).
- 1.14 The Parties agree to take account of any guidance issued by the Information Commissioner's Office. The Controller may on not less than 30 Working Days' notice to the Processor amend this Contract to ensure that it complies with any guidance issued by the Information Commissioner's Office.
- 1.15 Where the Parties include two or more Joint Controllers as identified in Annex 1 in accordance with GDPR Article 26, those Parties shall enter into a Joint Controller Agreement based on the terms outlined in Annex 2 in replacement of Clauses 1.1-1.14 for the Personal Data under Joint Control.

Annex 2 - Schedule of Processing, Personal Data and Data Subjects Processing, Personal Data and Data Subjects

This Schedule shall be completed by the Controller, who may take account of the view of the Processor, however the final decision as to the content of this Schedule shall be with the Controller at its absolute discretion.

1. The contact details of the Controller's Data Protection Officer are:

DataProtection@environment-agency.gov.uk
Horizon House, Deanery Road, Bristol BS1 5AH

2. The contact details of the Processor's Data Protection Officer are:

3. The Processor shall comply with any further written instructions with respect to processing by the Controller.

4. Any such further instructions shall be incorporated into this Annex 1.

Description	Details
Identity of the Controller and Processor	The Parties acknowledge that for the purposes of the Data Protection Legislation, the Agency is the Controller and the Contractor is the Processor in accordance with Clause 1.1.
Subject matter of the processing	<i>No Personal Data will be collected through the activities defined in this Contract.</i>
Duration of the processing	<i>No Personal Data will be collected through the activities defined in this Contract.</i>
Nature and purposes of the processing	<i>No Personal Data will be collected through the activities defined in this Contract.</i>
Type of Personal Data being Processed	<i>None</i>
Categories of Data Subject	<i>None</i>
Plan for return and destruction of the data once the processing is complete UNLESS requirement under union or member state law to preserve that type of data	<i>No Personal Data will be collected through the activities defined in this Contract.</i>

ANNEX A – BIDDERS PROPOSAL

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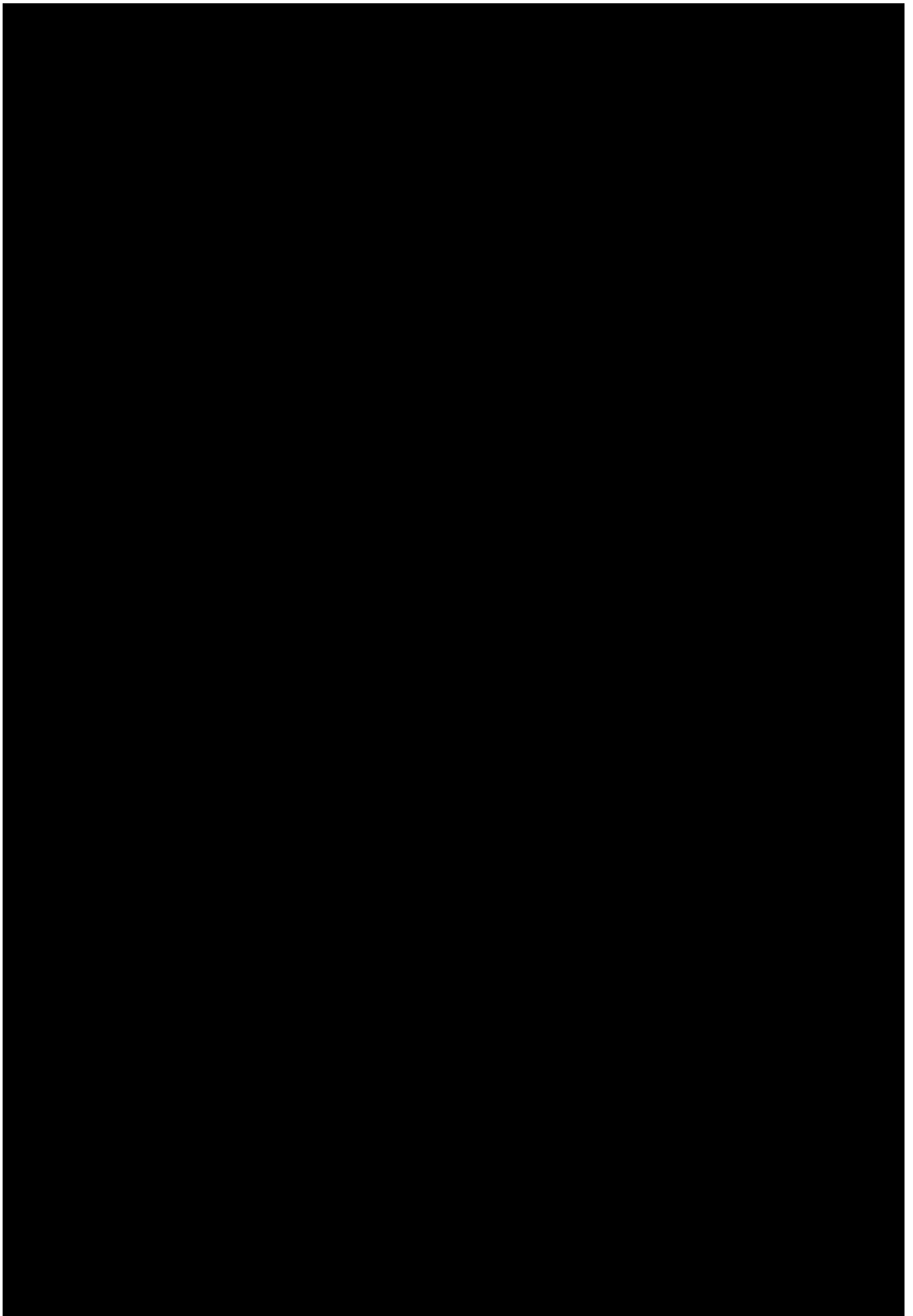
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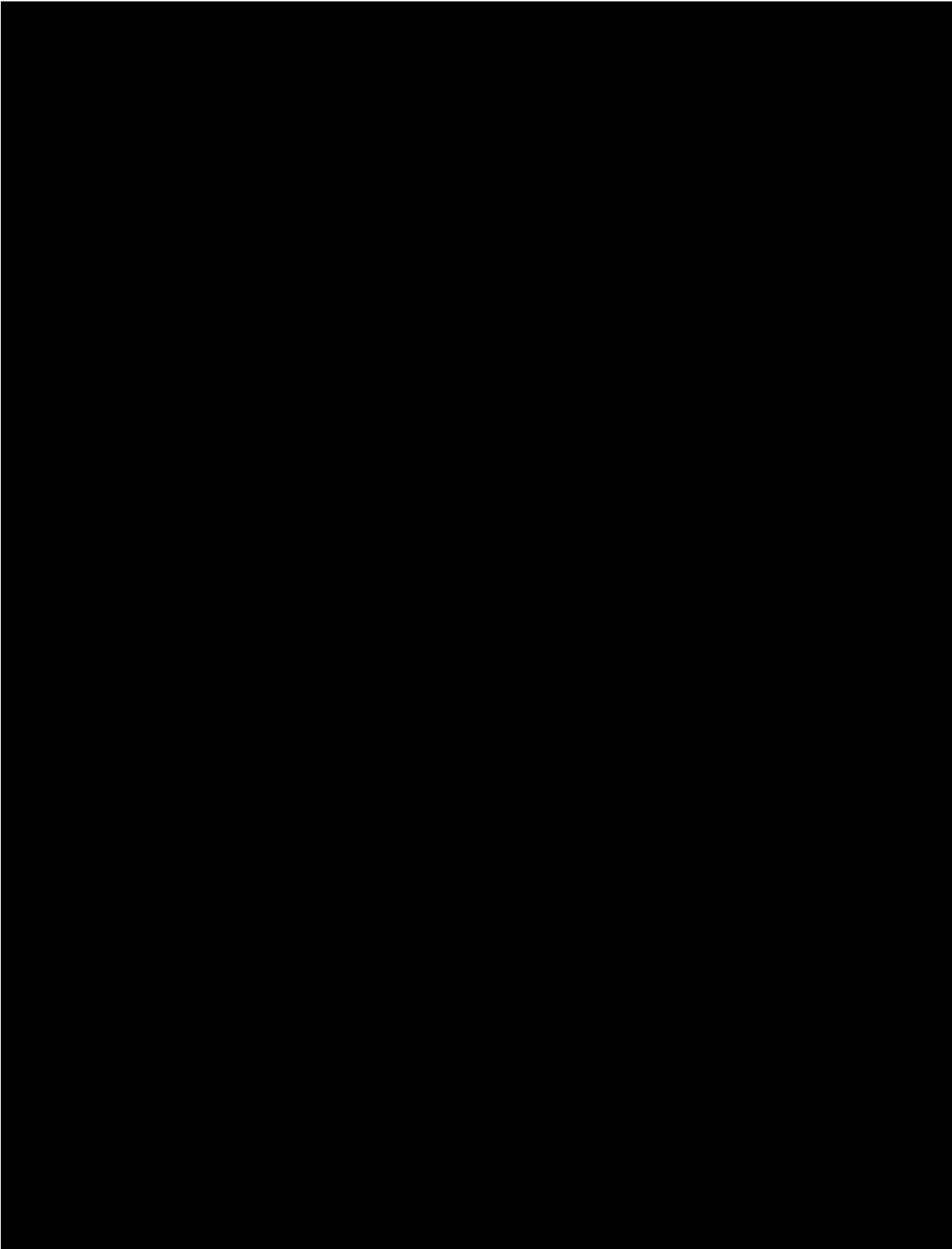
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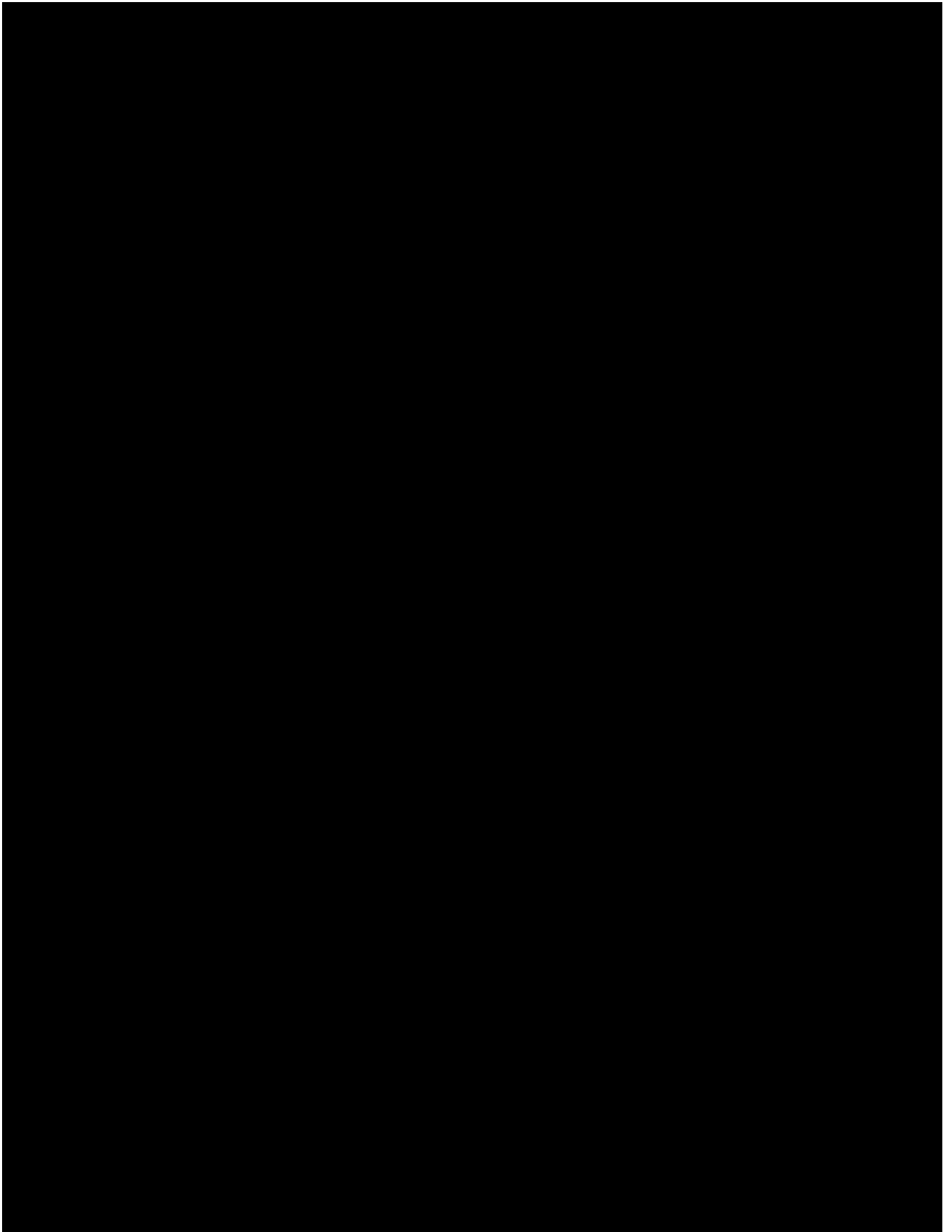
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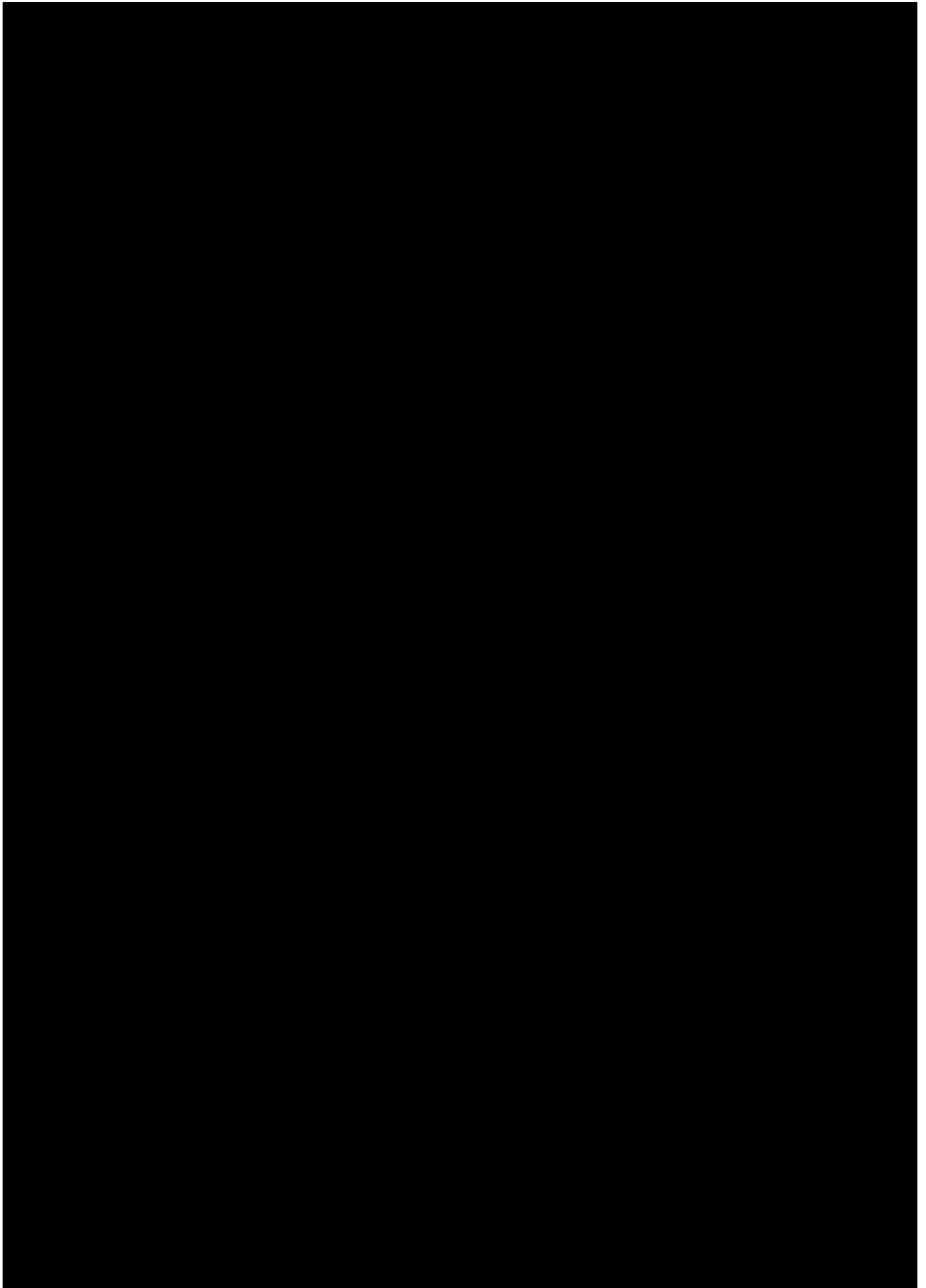
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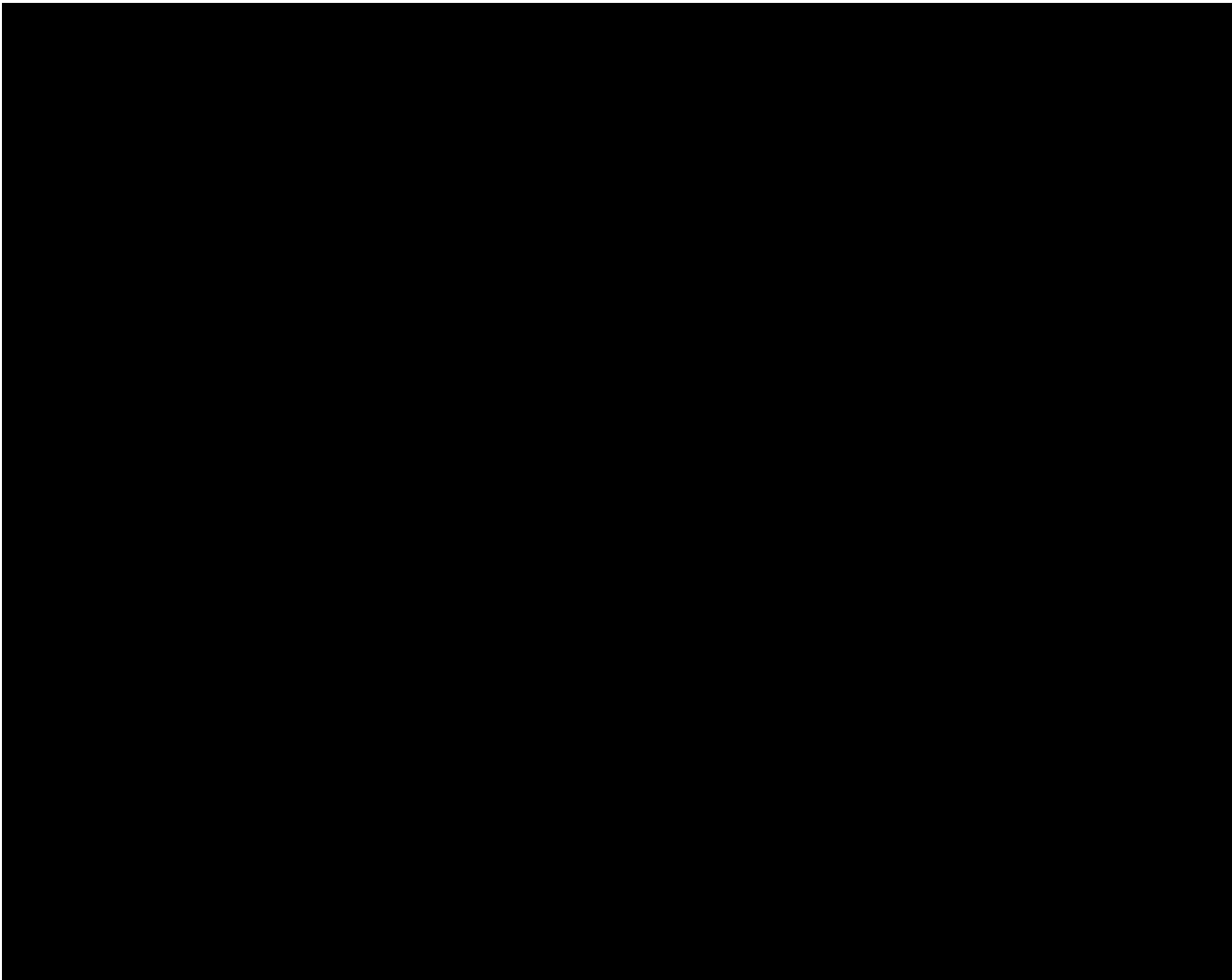
The first part of the paper discusses the importance of understanding the cultural context of the research. It highlights the need for researchers to be sensitive to the values and beliefs of the communities they are studying. This is particularly important in the field of education, where cultural differences can significantly impact learning outcomes. The paper then moves on to discuss the challenges of conducting research in culturally diverse settings. It notes that researchers often face difficulties in establishing rapport with participants and in interpreting their responses. To address these challenges, the paper suggests several strategies, including the use of local informants and the development of culturally appropriate research instruments. The final part of the paper discusses the importance of ethical considerations in cross-cultural research. It emphasizes the need for researchers to obtain informed consent from participants and to ensure that their research does not cause harm or exploitation. The paper concludes by noting that while cross-cultural research is a complex and challenging endeavor, it is also a highly rewarding one that can lead to a deeper understanding of the world and its diverse peoples.

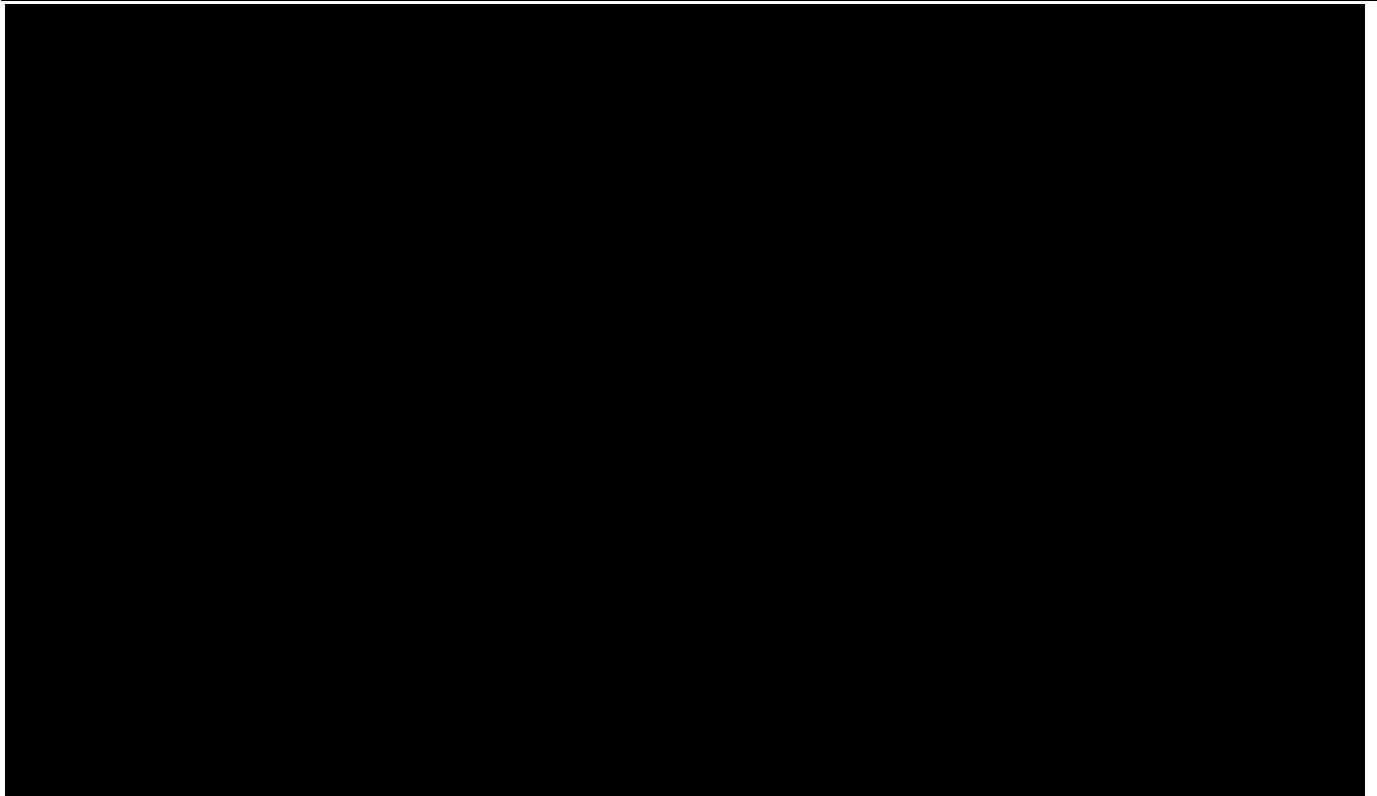
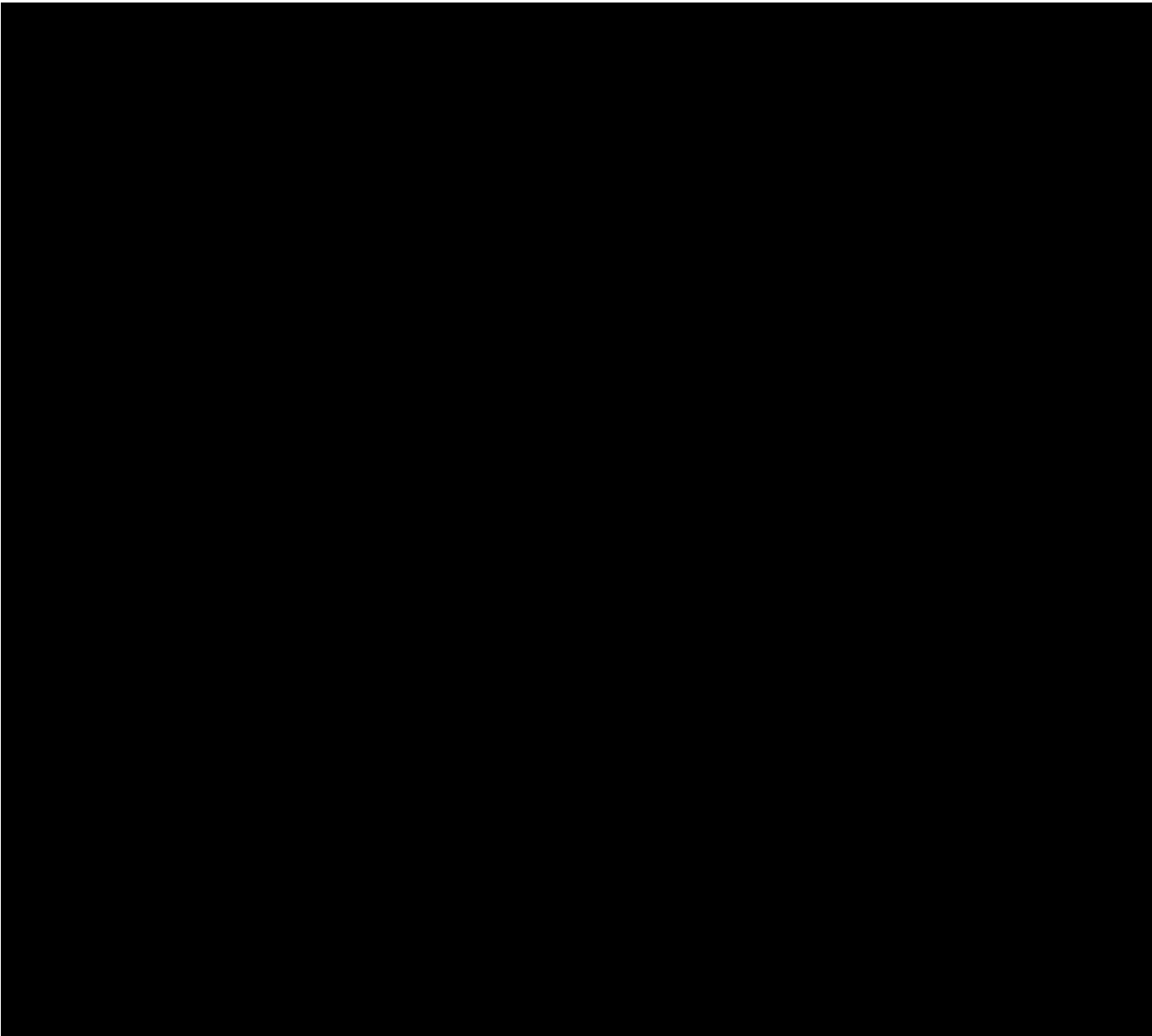


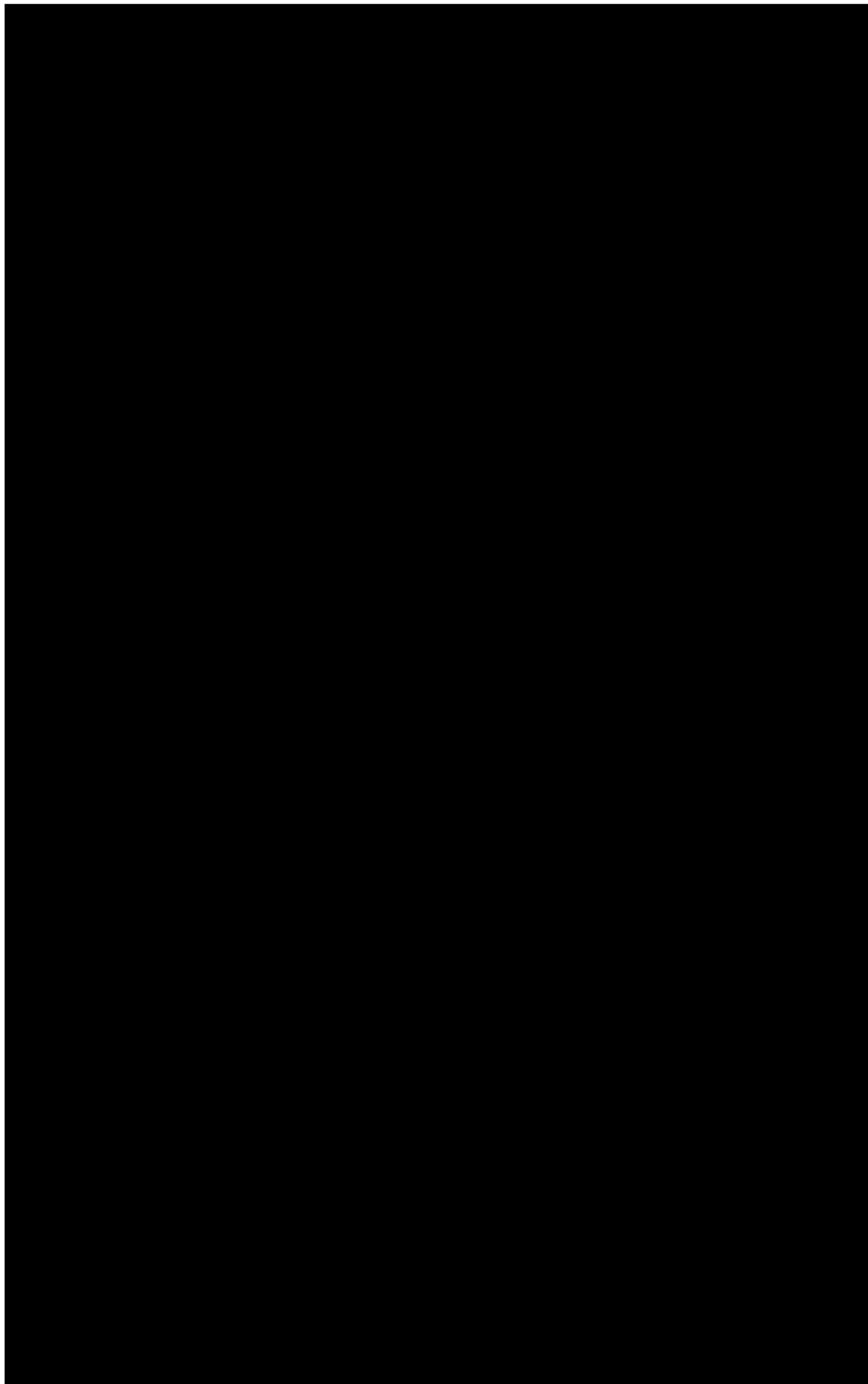


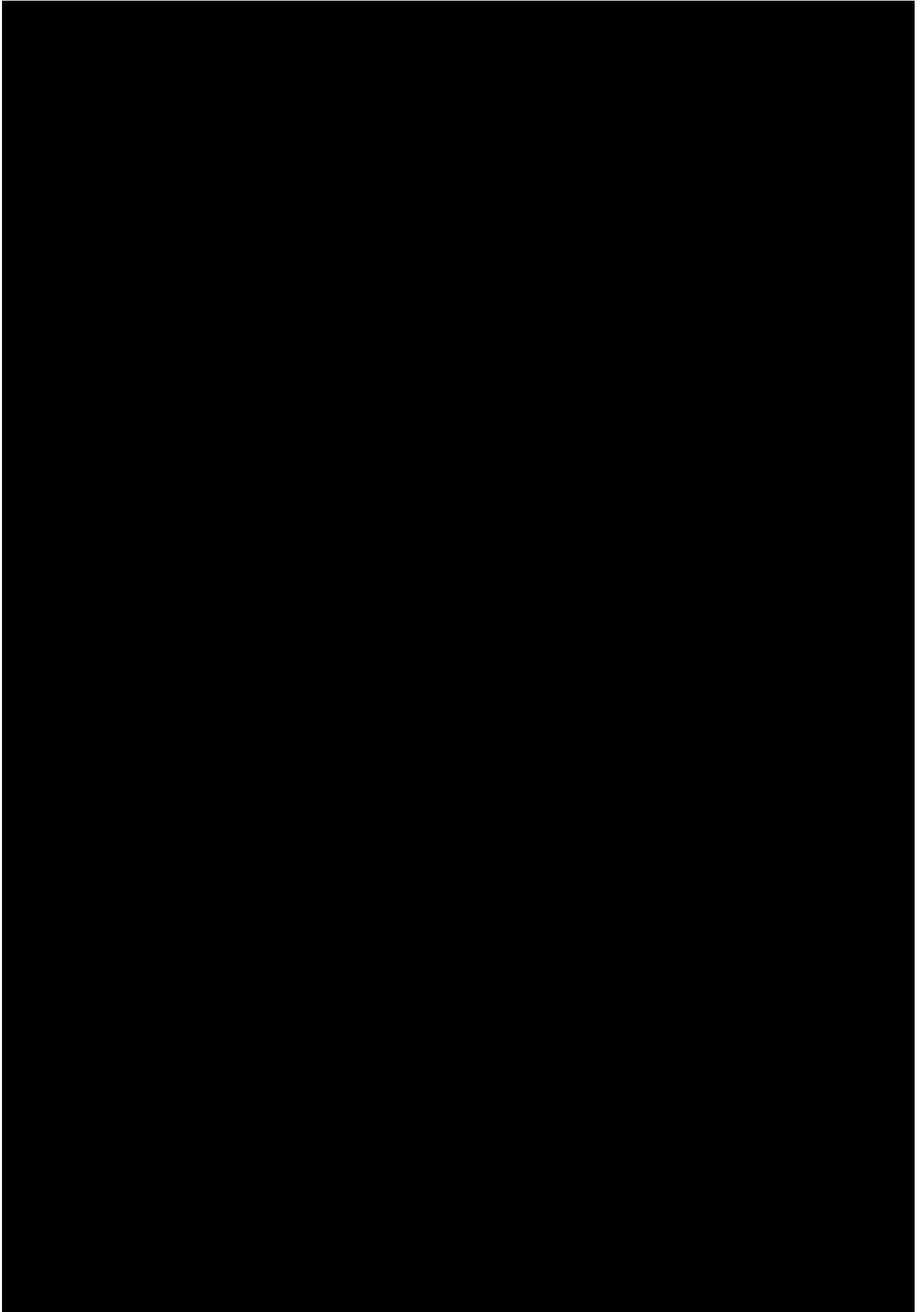


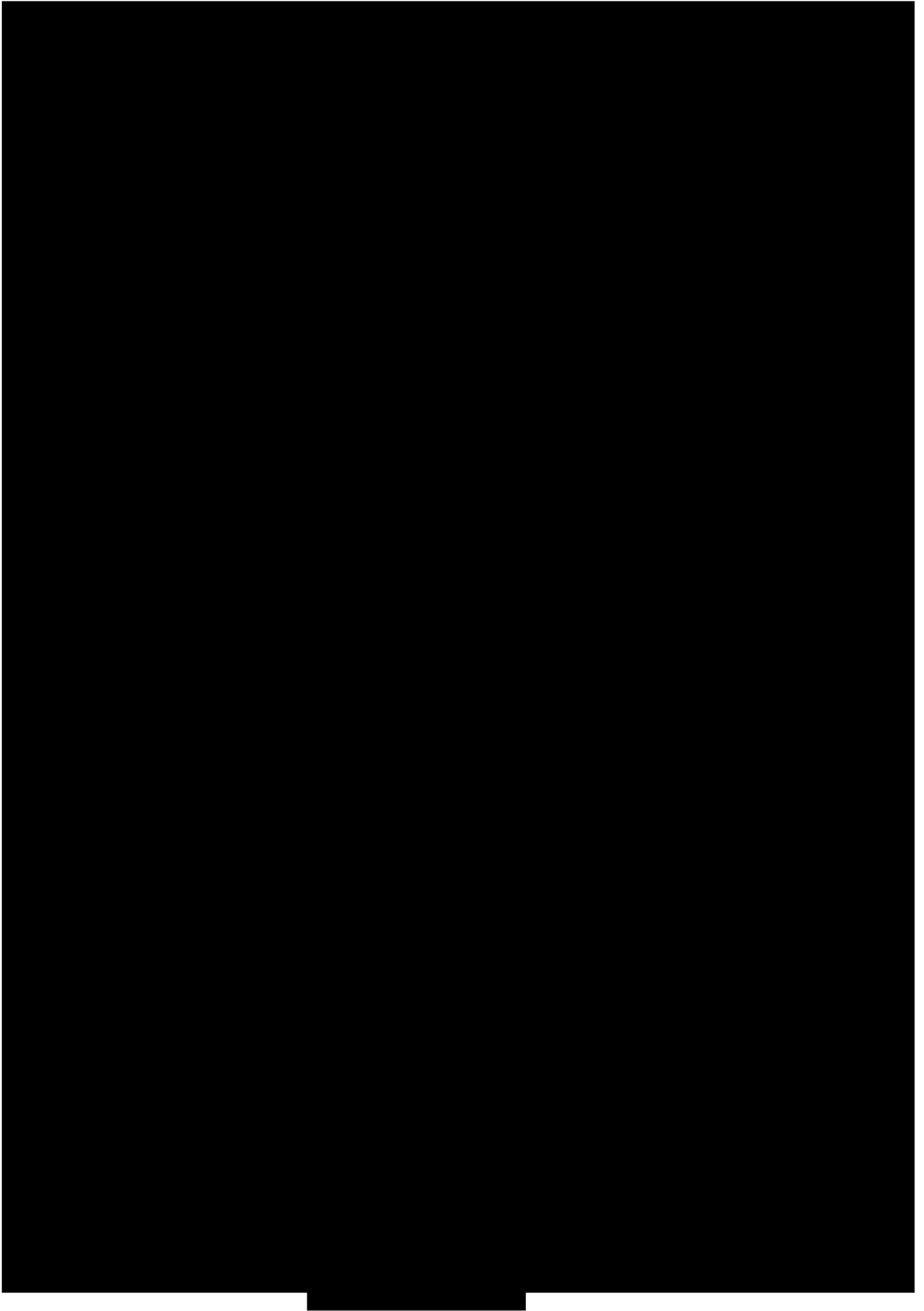


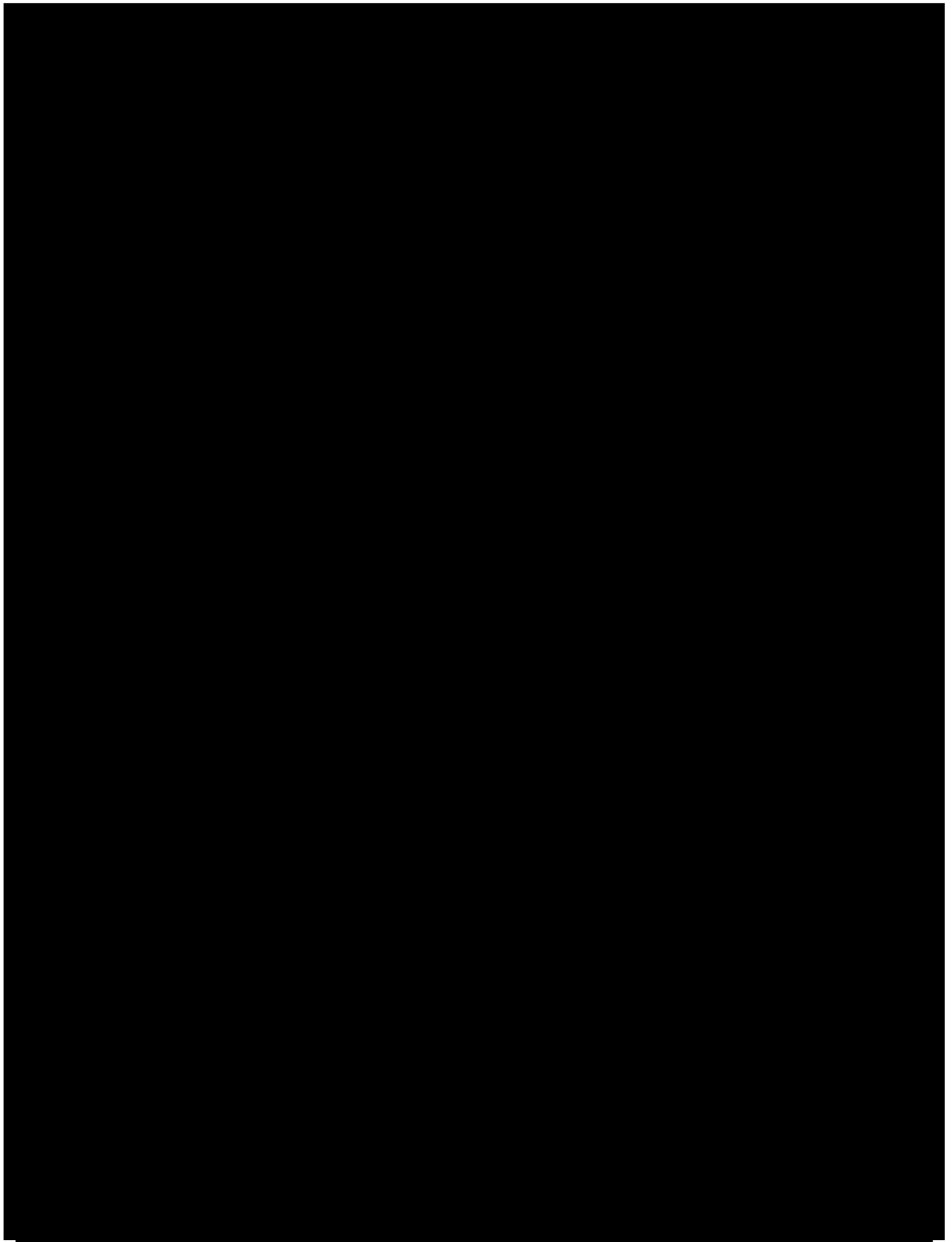




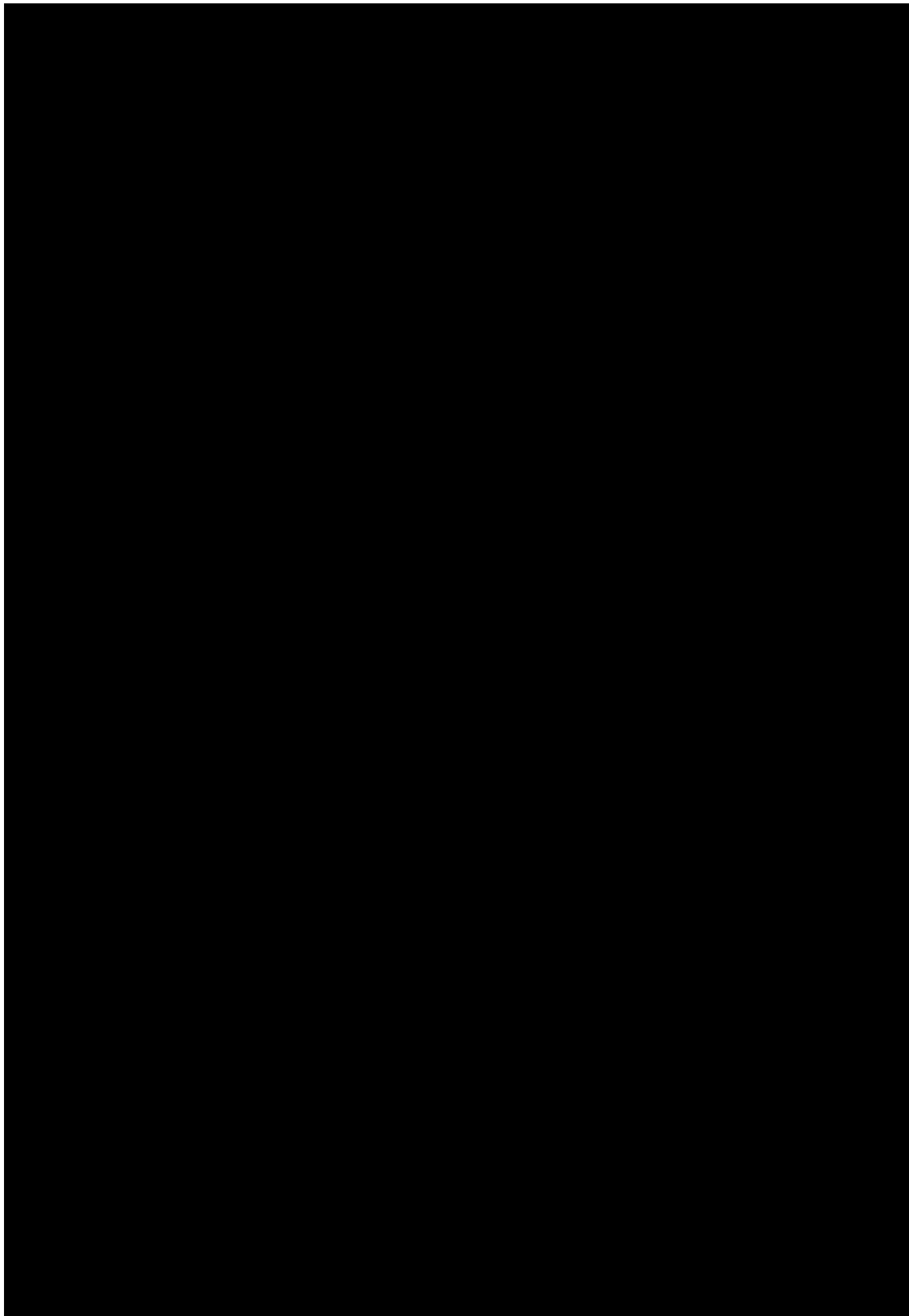








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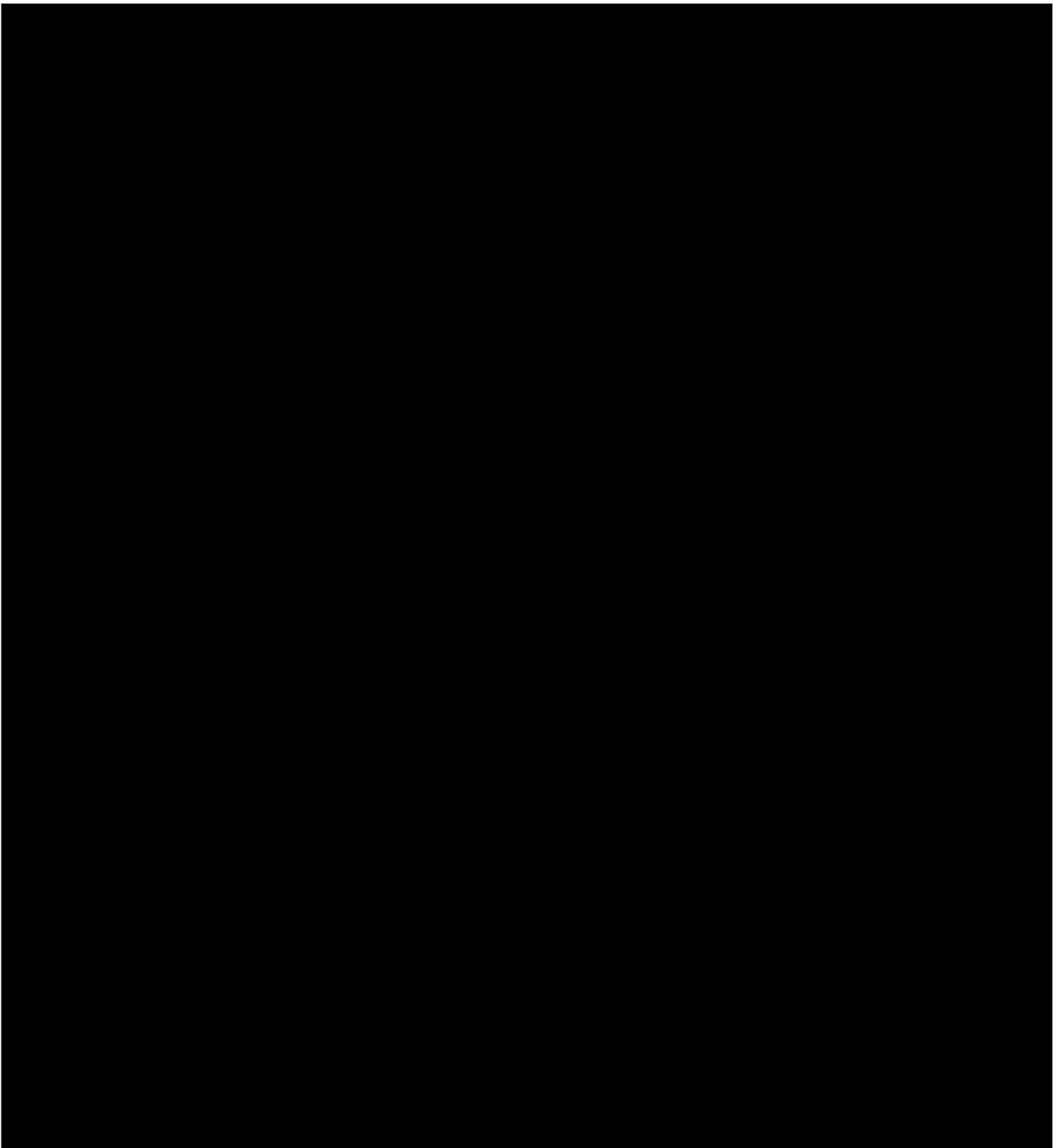


Figure 1: Shropshire boreholes, Shropshire geology model and Shropshire fault model with seismic

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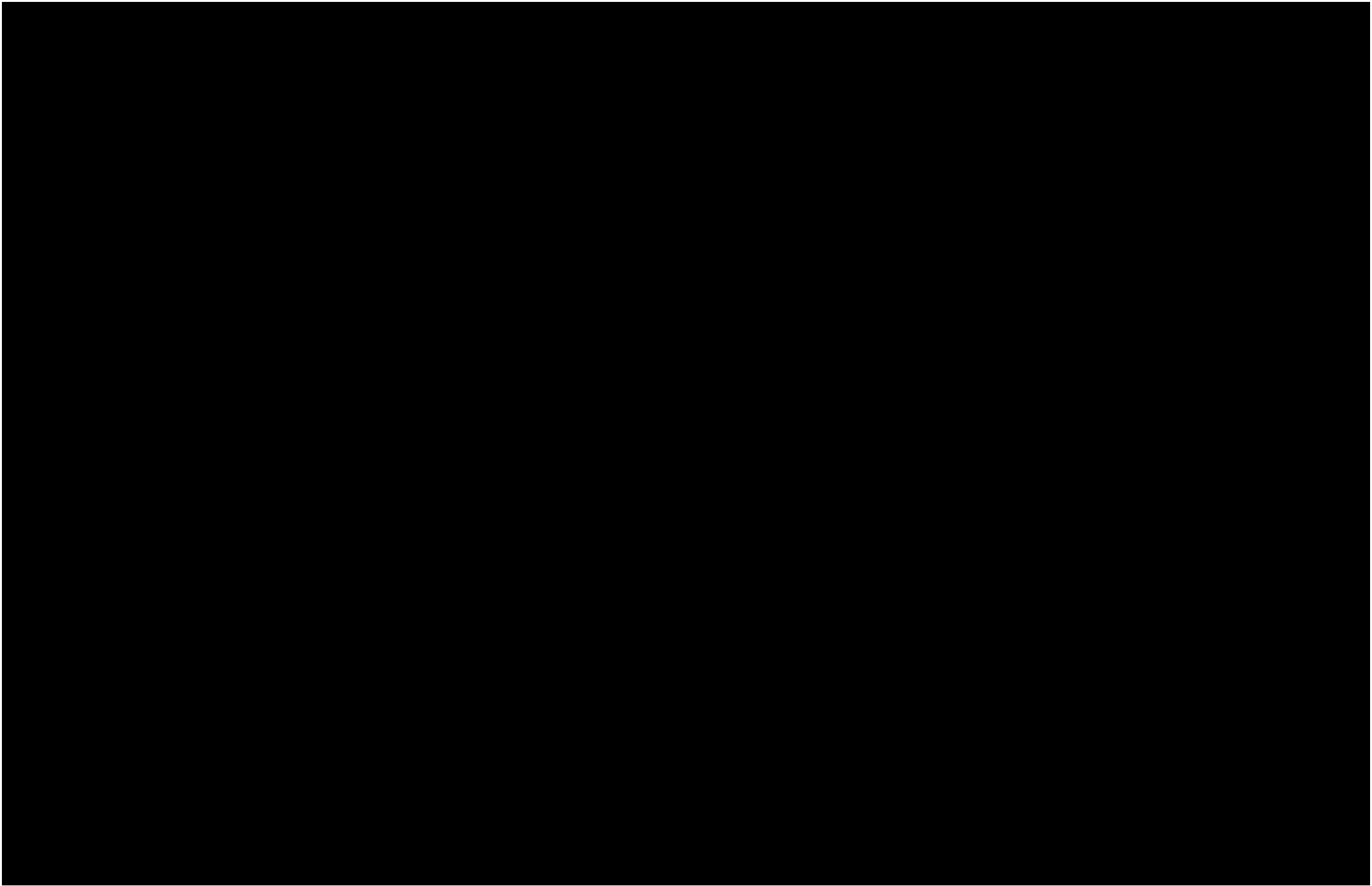
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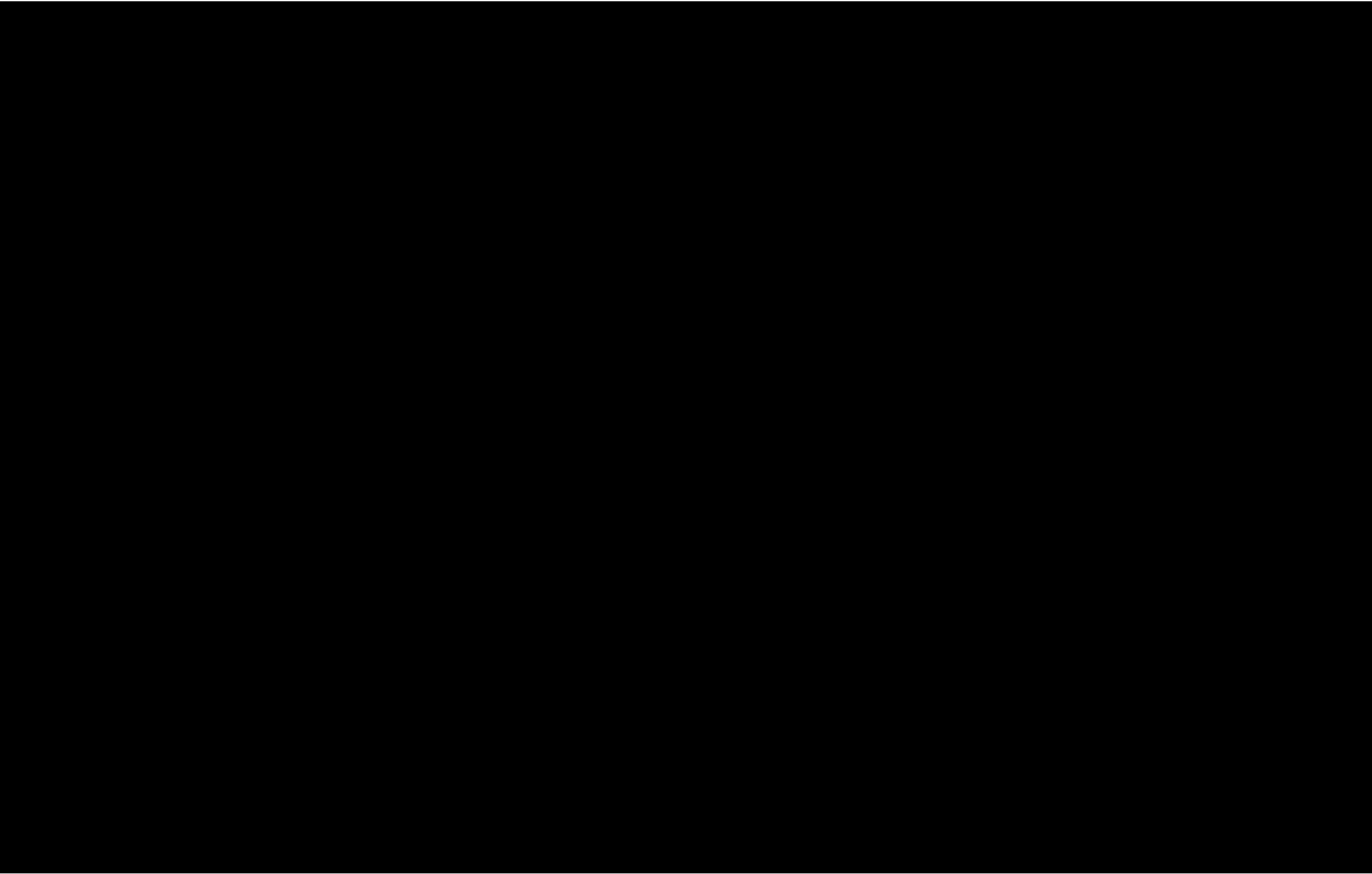
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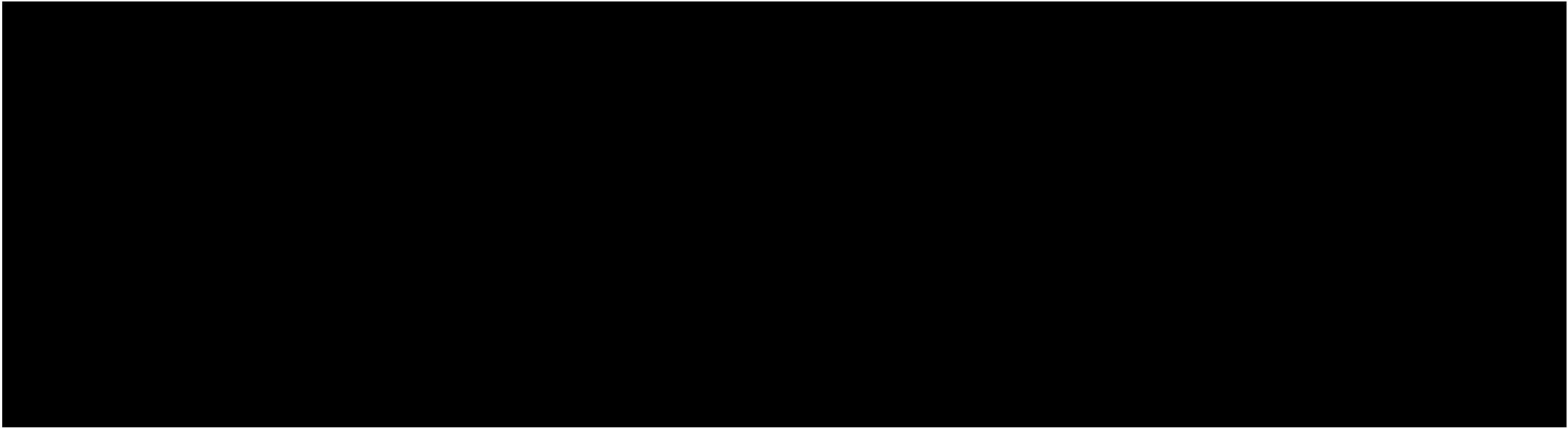
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